

Service Manual

MD Stereo System



SA-PM30MD

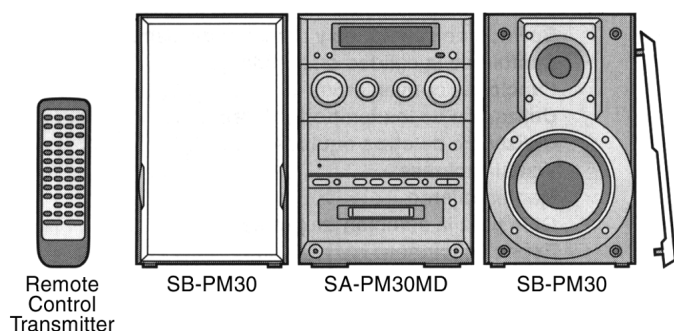
Colour

(S)... Silver Type

Area

(EB)... Great Britain

(EG)... Germany and Italy



TAPE SECTION

AR2 MECHANISM SERIES

CD SECTION

RAE0155Z TRAVERSE DECK SERIES

MD SECTION

MR3 MECHANISM SERIES

Specification

■ Amplifier Section

THD 10%, both channels driven

HIGH 2 X 6 W (6Ω)

LOW 2 X 14 W (6Ω)

Total BI-AMP power 2 X 20 W

Input sensitivity

AUX 320 mV

P-MD 100 mV

Input impedance

AUX 22 kΩ

P-MD 10 kΩ

Output impedance

Headphone 16-32 Ω

■ FM tuner section

Frequency range 87.50-108.00 MHz
(0.05 MHz steps)

Sensitivity 1.8μV (IHF)

S/N 26 dB 1.5μV

Antenna terminals 75 Ω unbalanced

■ AM tuner section

Frequency range 522-1629 kHz (9kHz steps)

Sensitivity

S/N 20 dB 500 μV/m

■ Cassette Deck Section

Track system 4 track, 2 channel

Heads

Record/playback Solid permalloy head

Erasure Double gap ferrite head

Motor DC servo motor

Recording system AC bias 100kHz

Erasing system AC erase 100kHz

Tape speed 4.8 cm/s

Overall frequency response (±3dB at DECK OUT)

NORMAL (TYPE I) 50- Hz - 13 kHz

HIGH (TYPE II) 50- Hz - 13 kHz

S/N ratio

Normal (TYPE I) 52dB (A weighted)

Wow and flutter 0.18 % (WRMS)

Fast forward and rewind time Approx. 120 seconds with C-60 cassette tape

■ MD section

System Minidisc digital audio system

Recording Magnetic field modulation direct overwrite

Reading	Non-contact optical system with semiconductor laser (Wavelength = 780nm)	For EB	AC 230-240 V, 50Hz
		For EG	AC 220-230 V, 50Hz
Sampling frequency	44.1 kHz	Power consumption	74 W
Coding system	ATrac *	Standby	
Number of channels	2 channels stereo	ECO	0.6 W
Wow and flutter	Below measurable limit	NORMAL	8.5 W
■ CD section		Dimensions (WxHxD)	195x288x292 mm
Sampling frequency	44.1kHz	Weight	5.6 kg
Decoding	16 bit linear	Notes :	
Beam source	Semiconductor laser	1. Specifications are subject to change without notices. Weight and dimensions are approximate.	
Wave length	780 nm	2. Total harmonic distortion is measured by the digital spectrum analyzer.	
Number of channels	2 channels stereo	* US and foreign patents licensed from Dolby Laboratories Licensing Corporation.	
S/N ratio		■ System: SC-PM30MD (EB)	Music Center: SA-PM30MD (EB)
SP OUT	82 dB (JIS A)		Speaker: SB-PM30 (E)
Wow and flutter	Below measurable limit	■ System: SC-PM30MD (EG)	Music Center: : SA-PM30MD (EG)
Digit filter	8 fs		Speaker: SB-PM30 (EG)
D/A converter	MASH (1 bit DAC)		
■ General			
Power supply			

WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

CONTENTS

	Page		Page
1 Before Repair and Adjustment	3	10 Measurement and Adjustment	21
2 Protection Circuitry	3	11 Illustration of IC's, Transistors and Diodes	25
3 Accessories	3	12 Terminal Function of IC's	26
4 Handling Precautions For Traverse Deck (CD/MD)	4	13 Block Diagram	33
5 Precaution of Laser Diode	5	14 Schematic Diagram	43
6 Caution for AC Mains Lead	6	15 Printed Circuit Board	63
7 Operation Procedures	7	16 Wiring Connection Diagram	74
8 Operation Check and Main Component Replacement Procedures	9	17 Troubleshooting Guide	75
9 Self-Diagnostic Display Function	19	18 Parts Location and Replacement Parts List	83

1 Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C905, C910 through a 10 Ω , 5W resistor to ground.

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

[EG]

- Current consumption at AC 230V, 50 Hz in NO SIGNAL mode should be ~150mA.

[EB]

- Current consumption at AC 240V, 50 Hz in NO SIGNAL mode should be ~150mA.

2 Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

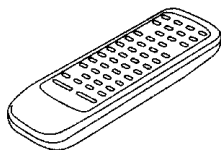
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

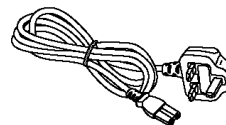
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

3 Accessories

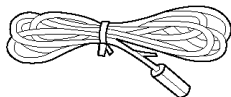
Note : Refer to Packing Materials & Accessories for part number.



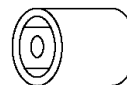
Remote Control Transmitter



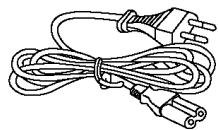
AC mains lead (EB)



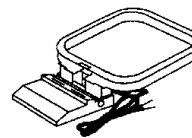
FM indoor antenna



FM antenna Plug
Adaptor (EB)



AC mains lead (EG)



AM Loop antenna

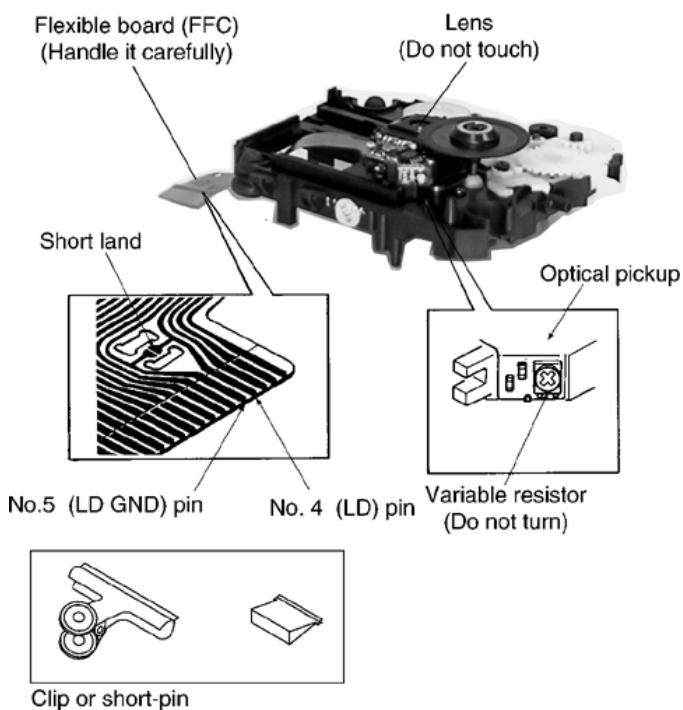
4 Handling Precautions For Traverse Deck (CD/MD)

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

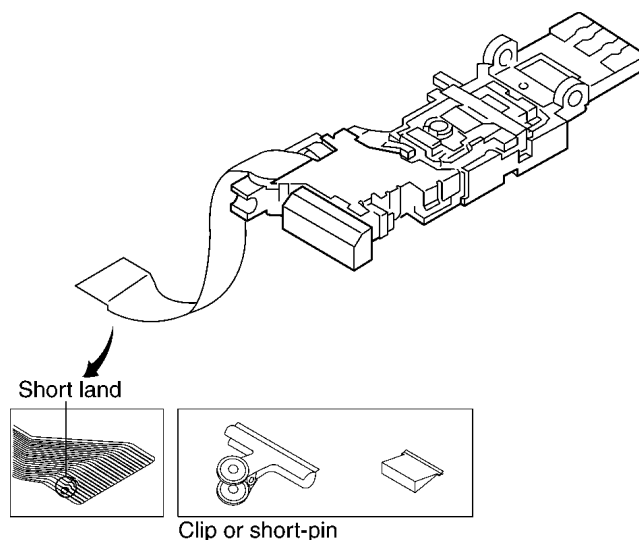
● Handling of CD traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. The short land between the No.4 (LD) and No.5 (GND) pins on the flexible board (FFC) is shorted with a solder build-up to prevent damage to the laser diode.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.



● Handling of MD Unit (optical pickup)

1. Do not subject the MD unit (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. The short land between the No.25 (LD-GND) and No. 24 (LD) pins on the flexible board is shorted with a solder builder up to prevent damage to the laser diode.
3. Take care not to apply excessive stress to the flexible board (FFC).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted..



● Grounding for electrostatic breakdown prevention

1. Human body grounding

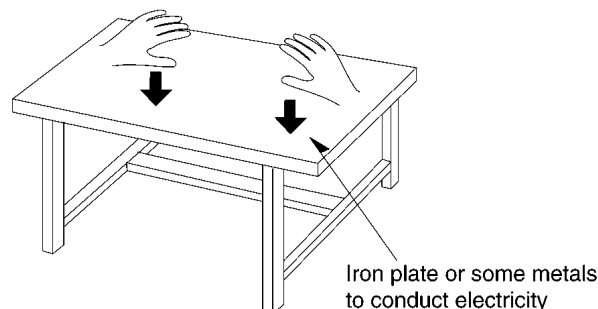
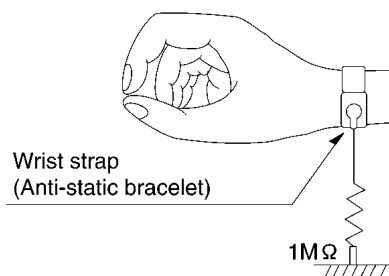
Use the anti-static wrist strap to discharge the static electricity from your body.

2. Work table grounding

Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



Caution when Replacing the Optical Pickup :

The traverse has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.

5 Precaution of Laser Diode

Caution :

This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens.

Wavelength : 780 nm

Maximum output radiation power from pick up : 100 mW/VDE

Laser radiation from pick up unit is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge : 780nm

Maximale Strahlungsleistung der Lasereinheit :100W/VDE

Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.

ADVARSEL :

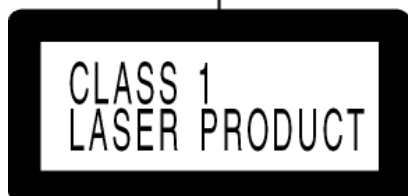
I dette a apparat anvendes laser.

CAUTION!

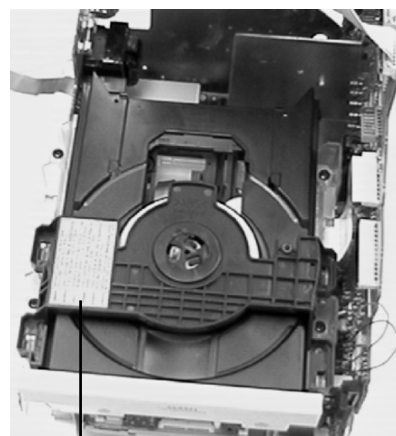
THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Use of Caution Labels



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING. NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNNGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	ÖSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLAS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

6 Caution for AC Mains Lead

(For “EB” area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral,

Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL \perp OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

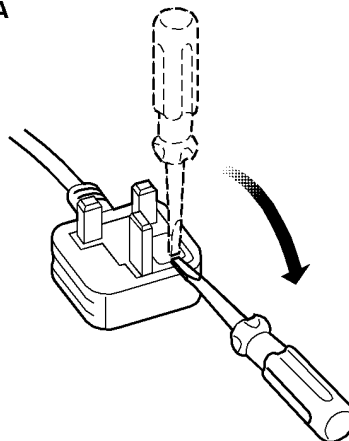
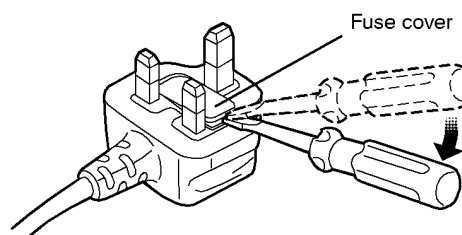


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

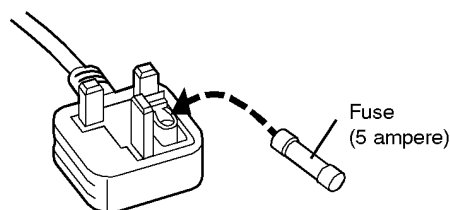
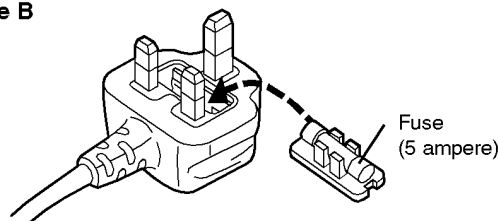
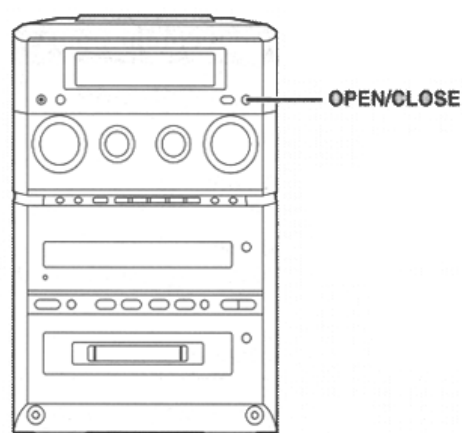


Figure B



7 Operation Procedures

A



A The glide panel

When the unit is turned on, the glide panel retracts automatically, enabling access to the operation buttons.
When the unit is turned off, the glide panel closes automatically.

To open/close the glide panel manually

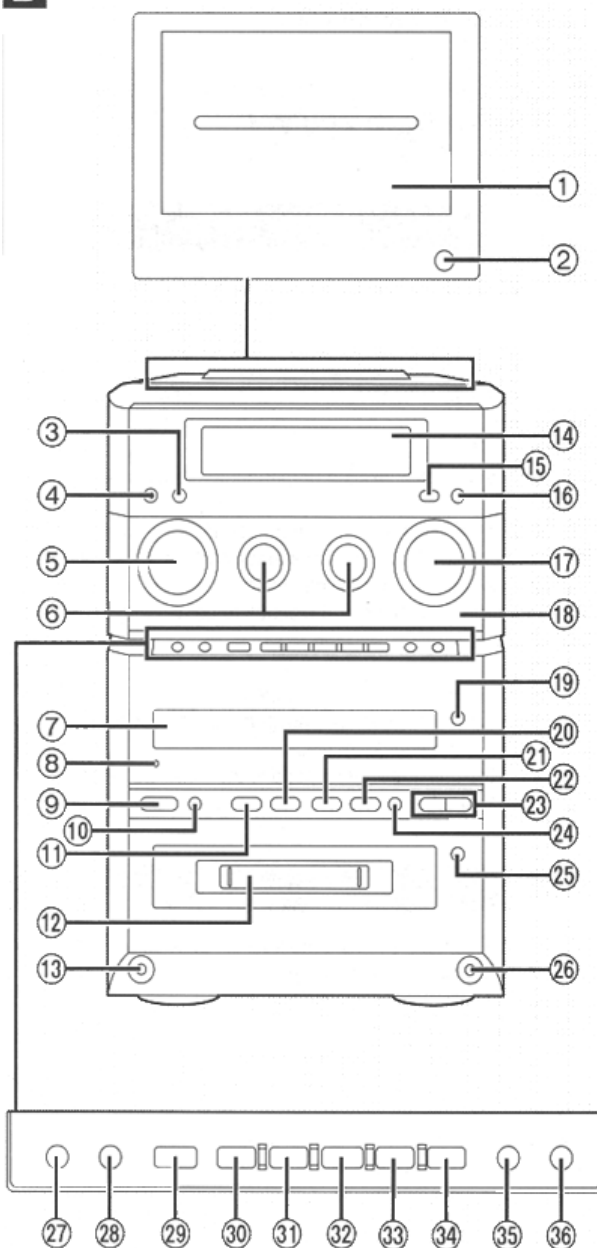
Press [OPEN/CLOSE] when the unit is on.

The display dims when the glide panel is closed manually.

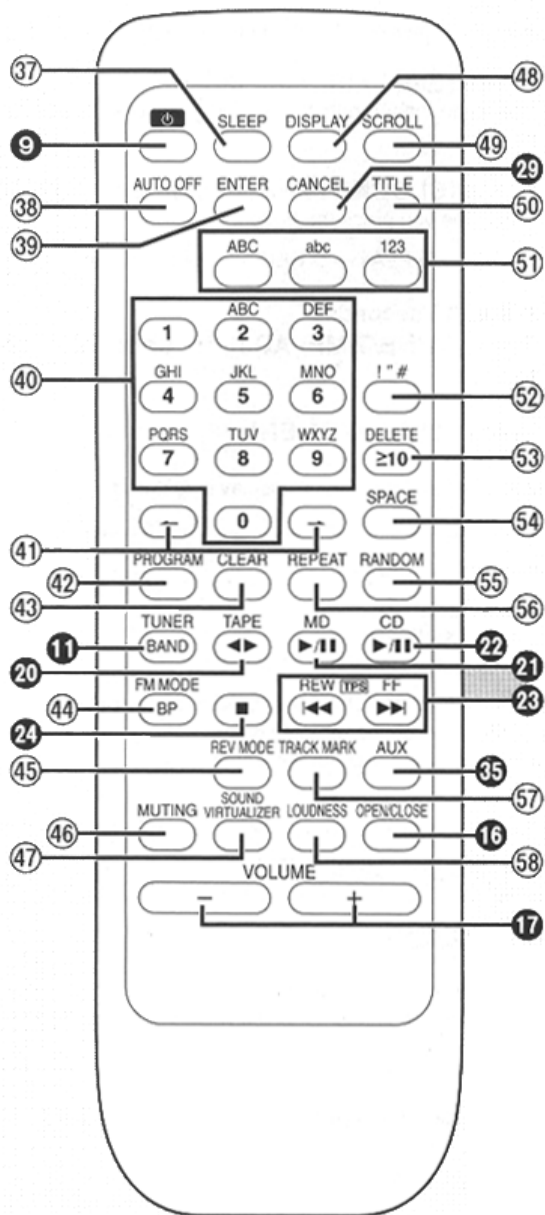
Front panel controls

B Main unit

B



- ① Cassette holder
- ② Cassette holder open button (▲, OPEN)
- ③ Clock/timer button (CLOCK/TIMER)
- ④ Play/record timer button and indicator (⌚ PLAY/⌚ REC)
- ⑤ Tune/time adjust control (TUNE/TIME ADJ)
- ⑥ Bass/treble controls (BASS, TREBLE)
- ⑦ CD tray
- ⑧ Standby indicator (⏻/⏻)
- When the unit is connected to the AC mains supply, this indicator lights red in standby mode and lights green when the unit is turned on.
- ⑨ Standby/on switch (⏻/⏻)
- Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- ⑩ Power saving mode button (MODE)
- ⑪ Tuner/band select button (TUNER/BAND)
- ⑫ MD slot
- ⑬ Headphone jack (🎧)
- ⑭ Display
- ⑮ Remote control signal sensor
- ⑯ Glide panel open/close button (OPEN/CLOSE)
- ⑰ Volume control (VOLUME)
- ⑱ Glide panel
- ⑲ CD tray open/close button (▲, OPEN/CLOSE)
- ⑳ Cassette play/direction button (TAPE ◀▶)
- ㉑ MD play/pause button (MD ▶/⏸)
- ㉒ CD play/pause button (CD ▶/⏸)
- ㉓ Disc skip/search, tape fast forward/rewind, TPS button (◀◀/REW, FF/▶▶)
- ㉔ Stop/function select button (■)
- ㉕ MD eject button (▲, EJECT)
- ㉖ P-MD terminal (P-MD)
- ㉗ Memory/enter button (MEMORY/ENTER)
- ㉘ MD edit button (MD EDIT)
- ㉙ Cancel button (CANCEL)
- ㉚ MD recording mode select, SP/LP mode select button (MD REC MODE, -SP/LP)
- ㉛ MD&TAPE record button (●, MD&TAPE)
- ㉜ Tape record/pause button (●/⏸, TAPE)
- ㉝ MD record/pause button (●/⏸, MD)
- ㉞ CD edit button (CD EDIT)
- ㉟ AUX analog/digital select button (AUX, ANALOG/DIGITAL)
- ㊱ P-MD button (P-MD)



Remote control

Buttons such as 9 function in the same way as the controls on the main unit.

- ① Sleep button (SLEEP)
- ② Auto power-off button (AUTO OFF)
- ③ Enter button (ENTER)
- ④ Numbered, character buttons (1-9, 0)
- ⑤ Cursor buttons (←, →)
- ⑥ Program button (PROGRAM)
- ⑦ Program clear button (CLEAR)
- ⑧ FM mode/BP select button (FM MODE, BP)
- ⑨ Reverse mode select button (REV MODE)
- ⑩ Muting button (MUTING)
- ⑪ Sound virtualizer button (SOUND VIRTUALIZER)
- ⑫ Display select button (DISPLAY)
- ⑬ Scroll button (SCROLL)
- ⑭ Title edit button (TITLE)
- ⑮ Character type select buttons (ABC, abc, 123)
- ⑯ Symbol button (!" #)
- ⑰ Delete, ten and over button (≥10, DELETE)
- ⑱ Space button (SPACE)
- ⑲ Random button (RANDOM)
- ⑳ Repeat button (REPEAT)
- ㉑ Track mark button (TRACK MARK)
- ㉒ Loudness button (LOUDNESS)

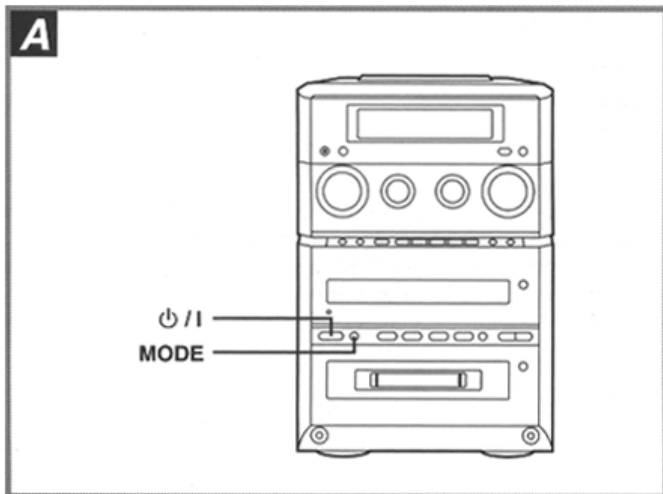
A Saving power in standby mode

Set the unit to reduce energy consumption in standby mode.

- ① Press [⏻/⏻] to turn the unit on.
- ② Press [MODE].
The current mode is displayed.
- ③ Within 2 seconds
Press [MODE] to select "ECO".
Each time you press the button;
NORMAL (off) ↔ ECO (on)
ECO: The clock is not displayed in standby mode.
Power consumption—For United Kingdom 0.6 W
For others 1.2 W
NORMAL: The clock is displayed in standby mode.
Power consumption—8.5 W

The standby indicator and the Ⓢ PLAY/Ⓢ REC indicator light in both modes.

The mode can be switched to ECO when the unit is off but it can not be switched back to NORMAL.



8 Operation Check and Main Component Replacement Procedures

“ATTENTION SERVICER”

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Refer the Parts No. on the page of "Main Component Replacement Procedures", if necessary.

Contents

- Checking Procedure for each major P.C.B.
 - Checking of the Deck P.C.B.
 - Checking for the Transformer P.C.B.
 - Checking for the Main P.C.B.
 - Checking for the Tuner and FL P.C.B.
 - Checking for the CD Servo P.C.B.
 - Checking for the MD Servo P.C.B.
 - Checking for the Power P.C.B.
- Disassembly and Assembly of the Disc Tray and CD Traverse Unit
 - Disassembly of the Disc Tray
 - Disassembly of the CD Traverse Unit
- Main Component Replacement Procedure
 - Replacement of the CD Servo P.C.B. and Optical Pick-up Unit
 - Removal of the Deck P.C.B. and Mechanism P.C.B. for replacing parts
 - Replacement for the Magnetic Head and Optical Pick-up
 - Replacement for the Belt and Loading Motor Assembly
 - Replacement for the Traverse Motor Assembly

Warning :-

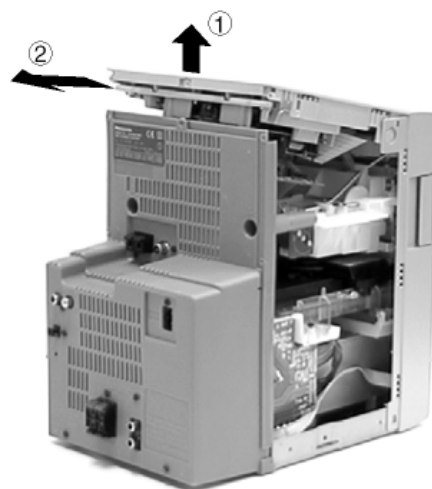
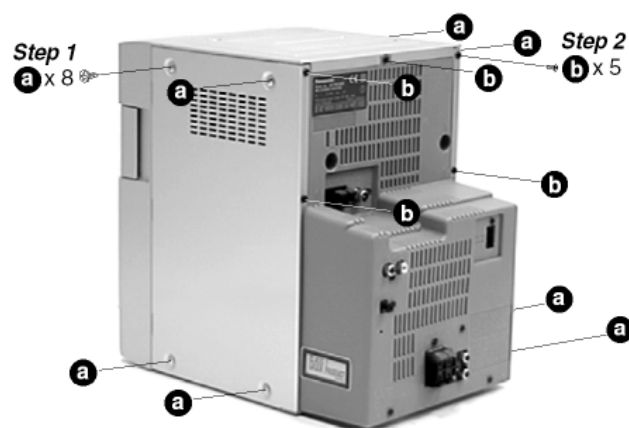
This product uses a laser diode. Refer to caution statement Precaution of Laser Diode.

ACHTUNG :-

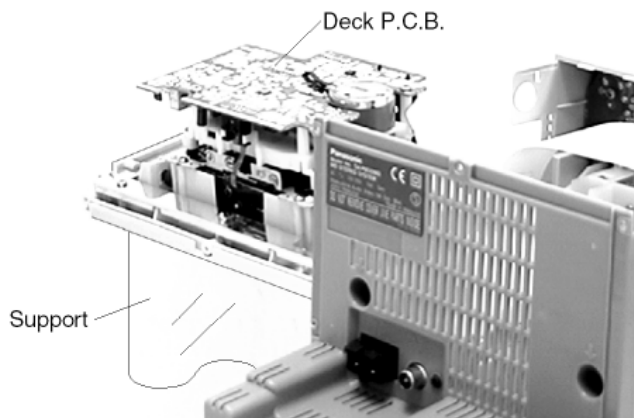
- Die Lasereinheit nicht zerlegen.
- Die Lasereinheit darf nur gegen eine vom Hersteller spezifizierte Einheit ausgetauscht werden.

8.1. Checking Procedure for Each Major P.C.B.

8.1.1. Checking for the Deck P.C.B.

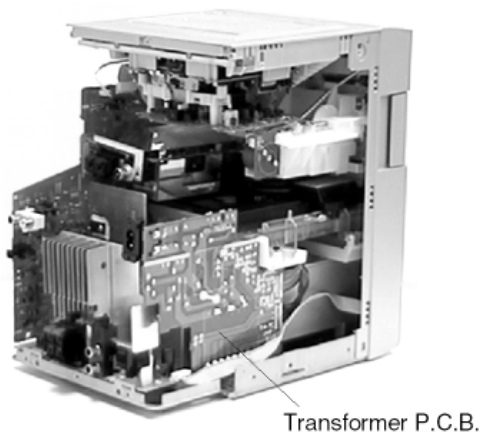
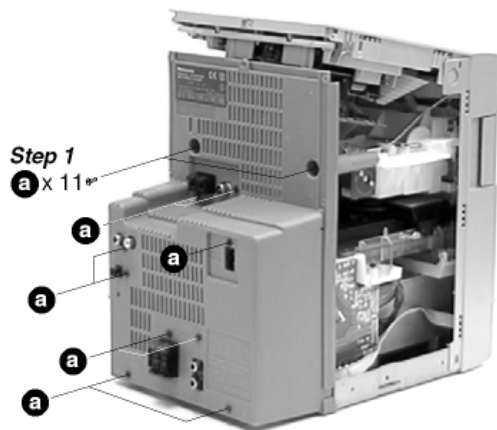


Step 3 Lift the deck unit in direction 1 and follow by direction 2 to remove the deck unit.



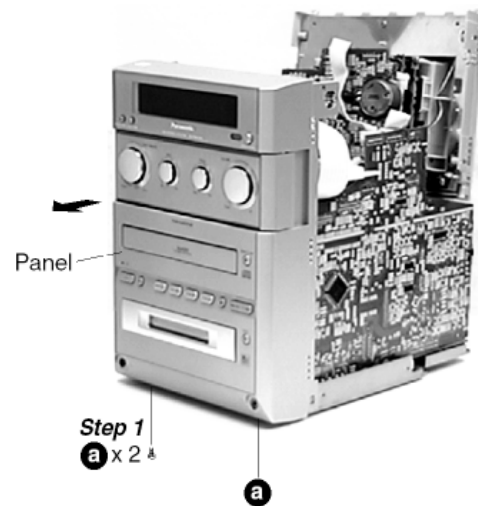
- Check the Deck P.C.B. as shown.

8.1.2. Checking for the Transformer P.C.B.

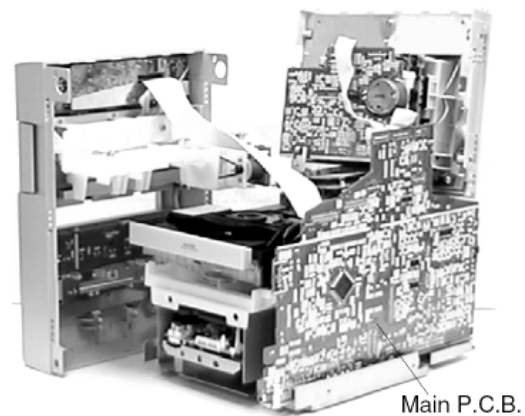


- Check the Transformer P.C.B. as shown.

8.1.3. Checking for the Main P.C.B.

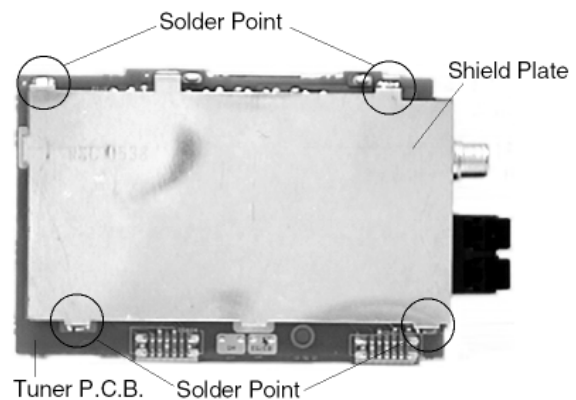


Step 2 Remove the panel in the direction of arrow.

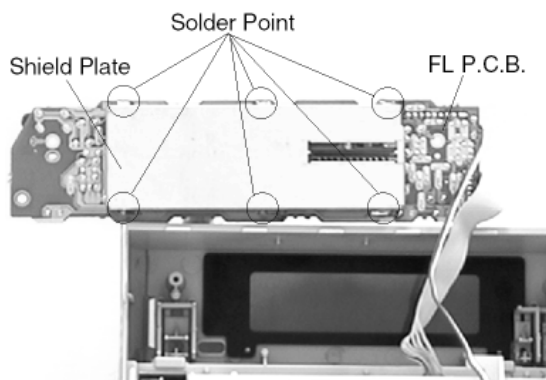


- Check the Main P.C.B. as shown.

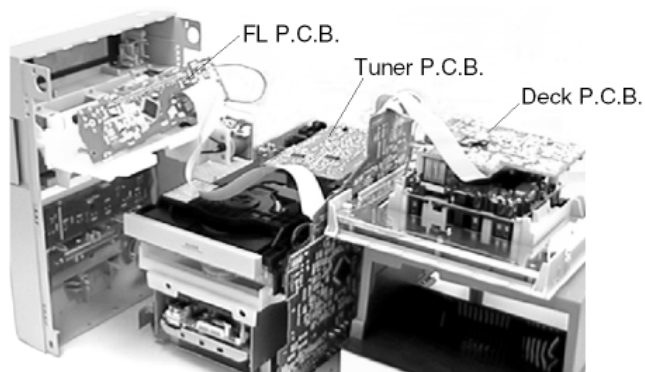
8.1.4. Checking for the Tuner and FL P.C.B.



Step 1 Desolder 4 points and remove the shield plate.

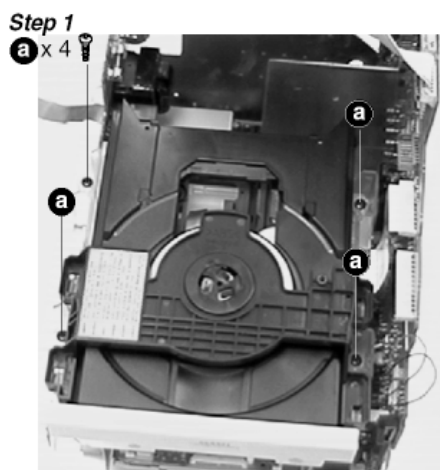


Step 2 Desolder 6 points and remove the shield plate.

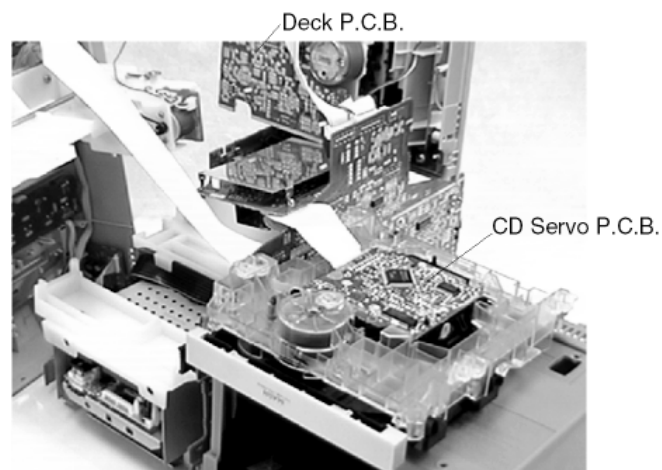


- Check the Tuner and FL P.C.B. as shown.

8.1.5. Checking for the CD Servo P.C.B.

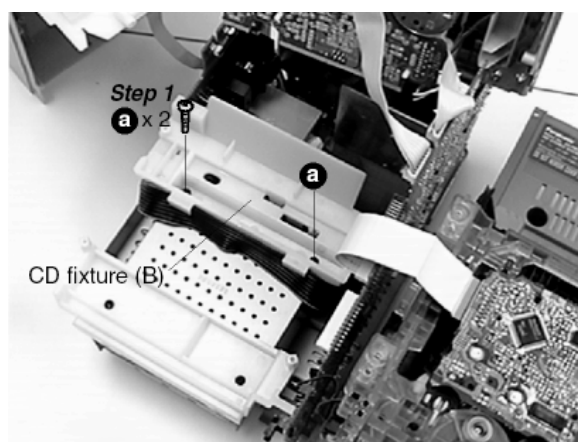


Step 2 Lift up the CD unit and place it as shown in the following figure.

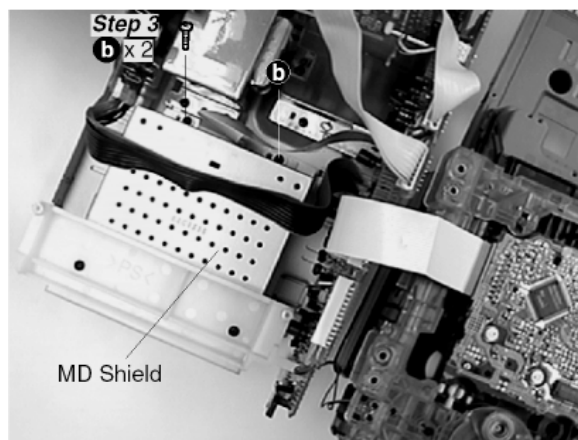


- Check the CD Servo P.C.B. as shown.

8.1.6. Checking for the MD Servo P.C.B.



Step 2 Remove the CD fixture (B).

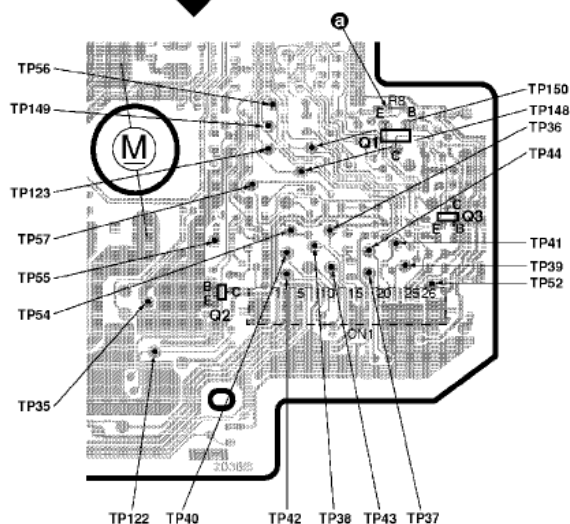


Step 4 Remove the MD shield and place the MD Servo unit as shown in the following figure.

- Check the MD Servo P.C.B. as shown.
- When checking the IC1 on the MD Servo P.C.B., it can be measured with test point on the MD Servo P.C.B.



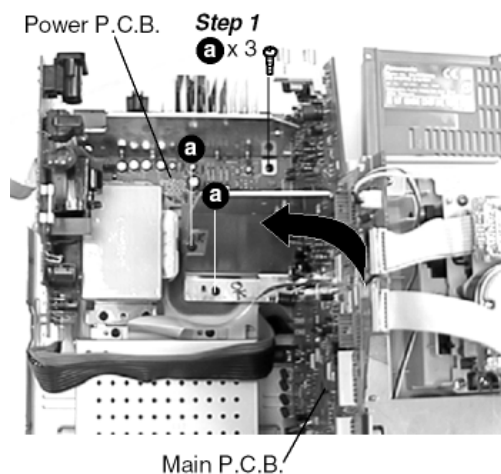
MD Servo P.C.B.



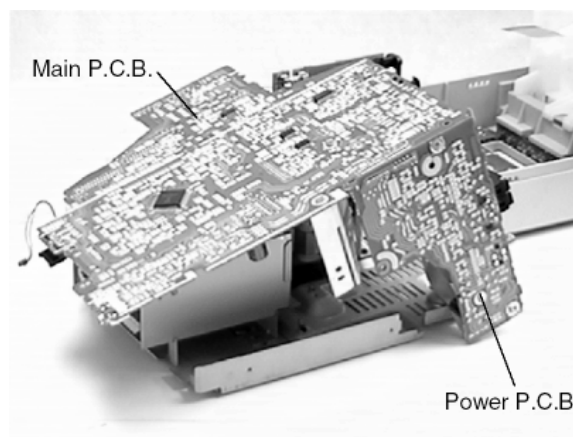
Pin No. of IC1	Test point	Pin No. of IC1	Test point
2PIN	Left side of R8 (⊕)	32PIN	TP52
5PIN	TP54	36PIN	Equivalent for pin 16 of IC3
11PIN	TP55	37PIN	TP35
16PIN	TP57	38PIN	TP44
21PIN	TP56	39PIN	TP37
26PIN	TP36	40PIN	TP38
27PIN	TP150	41PIN	TP43
28PIN	TP149	44PIN	TP42
29PIN	TP148	45PIN	TP40
30PIN	TP123	46PIN	TP39
31PIN	TP122	47PIN	TP41

(The waveforms are noted on the schematic diagram.)

8.1.7. Checking for the Power P.C.B.



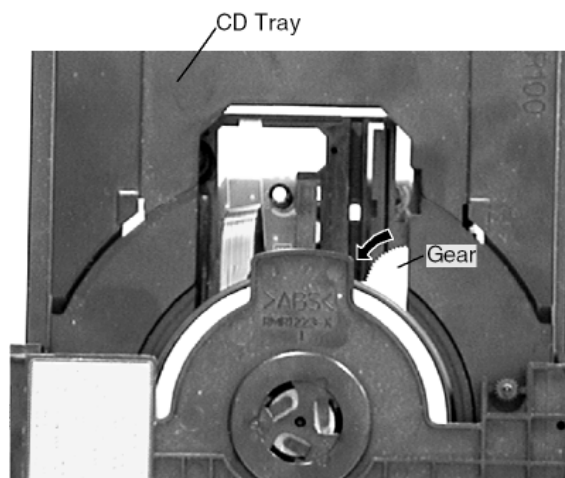
Step 2 Lift up the Main P.C.B. together with the Power P.C.B. and rotate left then place the P.C.B. as shown in the following figure.



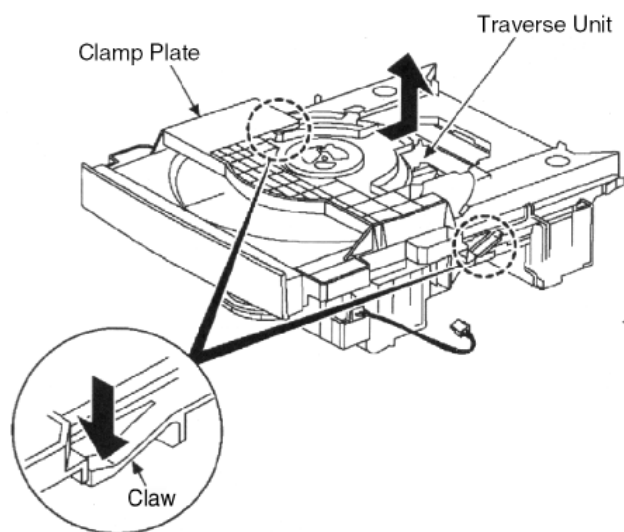
- Check the Power P.C.B. as shown.

8.2. Disassembly and Assembly of the Disc Tray and CD Traverse Unit

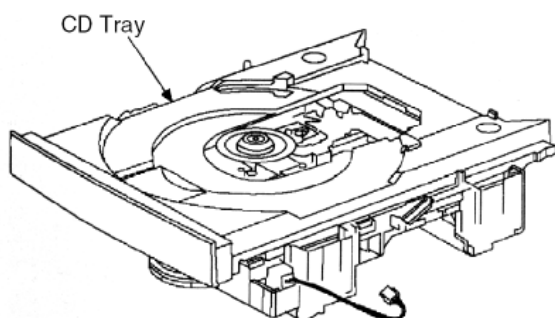
8.2.1. Disassembly of the Disc Tray.



Step 1 Turn the gear counter clock wise until the CD Tray starts to move out.

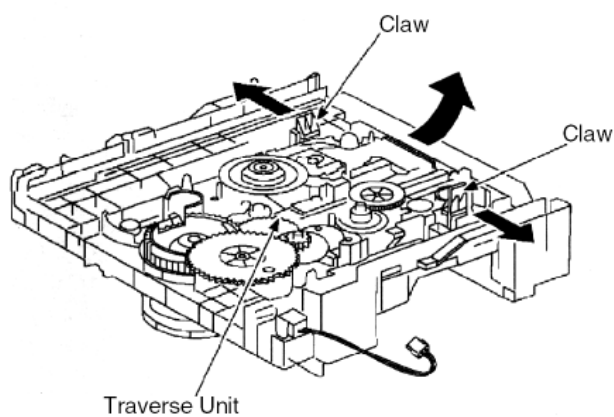


Step 2 Release the 2 claws and remove the clamp plate in the direction of the arrow.

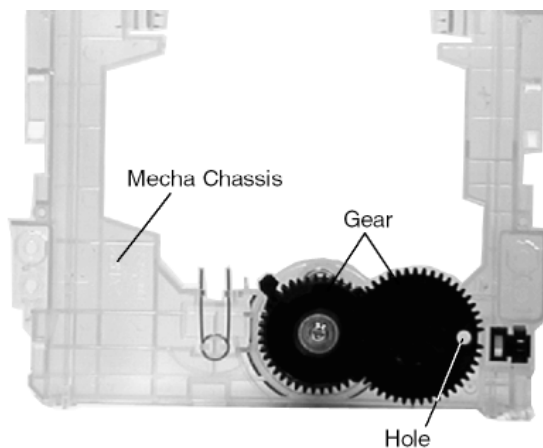


Step 3 Lift up the CD Tray to remove it.

8.2.2. Disassembly of the CD Traverse Unit.

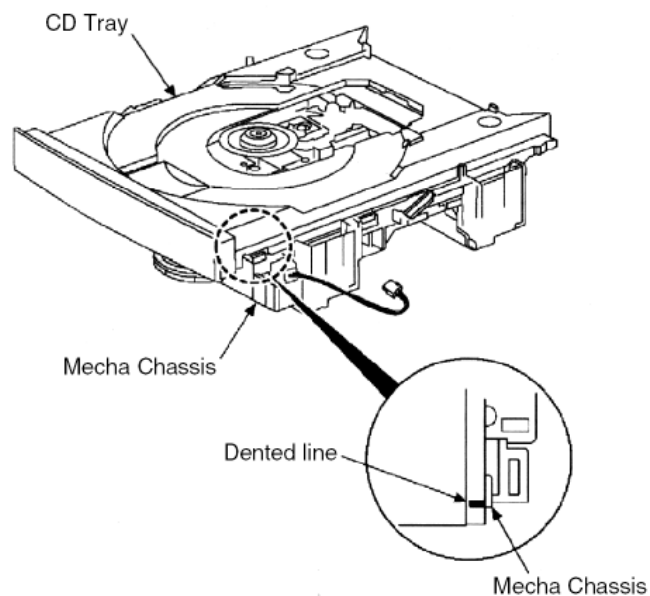


Step 1 Release the 2 claws and remove the CD Traverse Unit in the direction of the arrow.



NOTE :

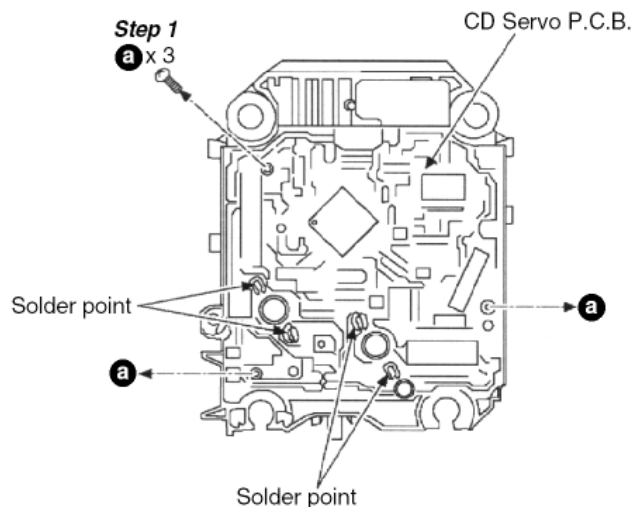
1. Follow the reverse procedure to replace the CD Traverse Unit and CD Tray.
2. Make sure that the 2 gear is in position shown above and the hole on the right gear is align with the hole below it when replacing the CD Traverse Unit and CD Tray.



NOTE : When replacing the CD Tray, make sure the Dented line is at the position as shown.

8.3. Main Component Replacement Procedure

8.3.1. Replacement of the CD Servo P.C.B. and Optical Pick-up Unit.

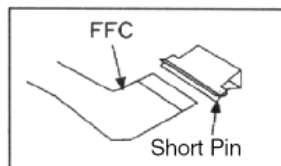
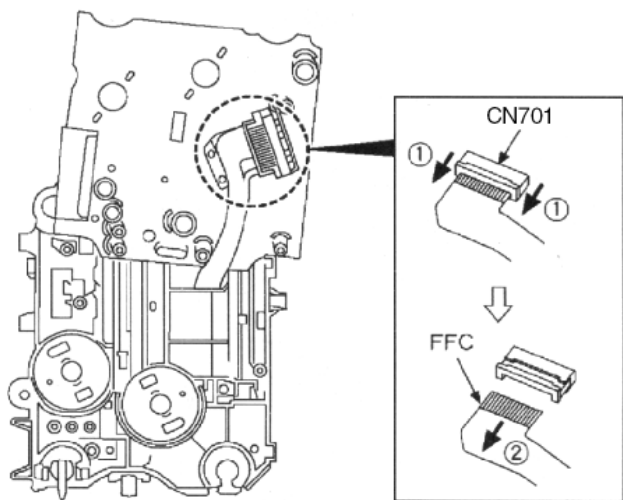


Step 2 Desolder the 4 legs of 2 motors and flip over the CD Servo P.C.B.

Step 3 Remove the flexible cable at CN701.

- Removal of the flexible cable

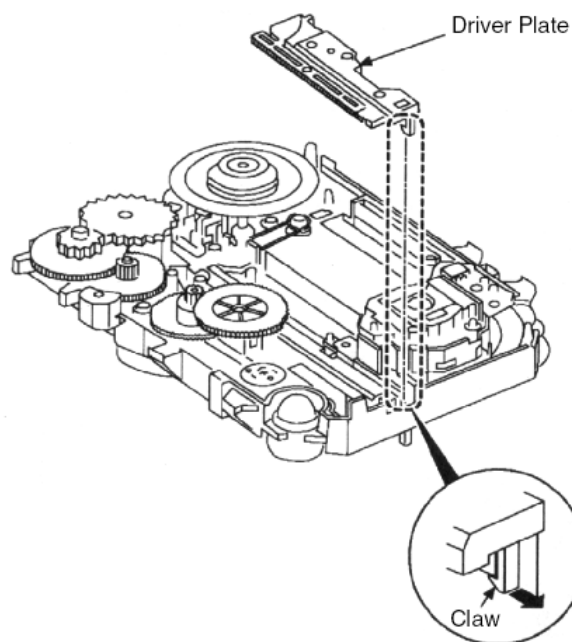
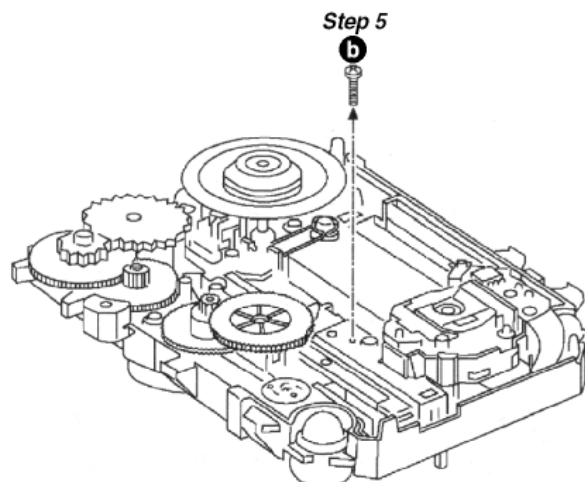
Push the top of the connector in the direction of the arrow 1 and then pull out the flexible cable in the direction of the arrow 2.



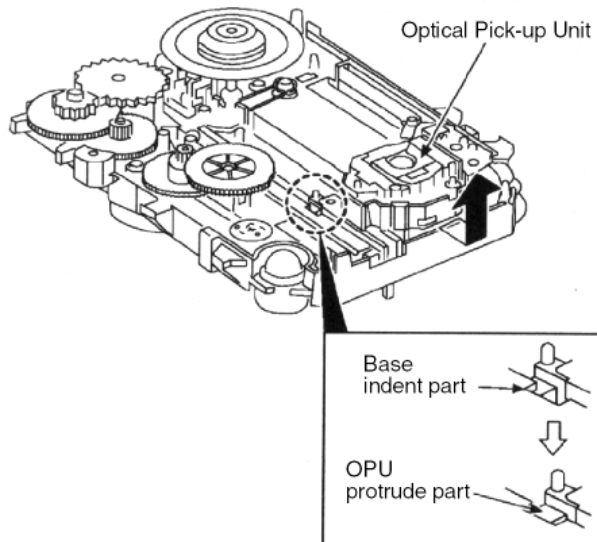
NOTE : Insert a short pin into the flexible cable.



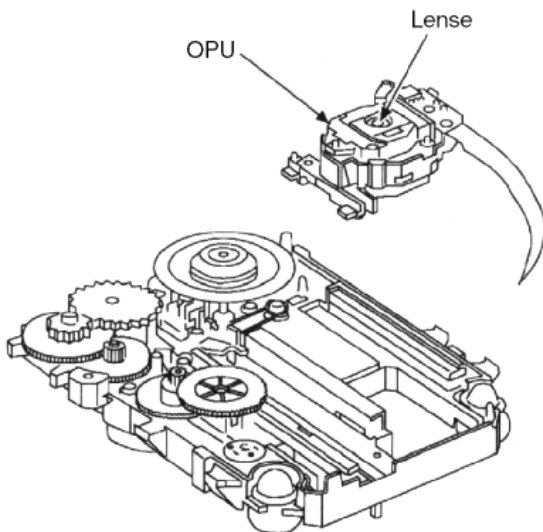
Step 4 Push the lever in and turn the gear clock wise fully.



Step 6 Release the claw and remove the Driver Plate.

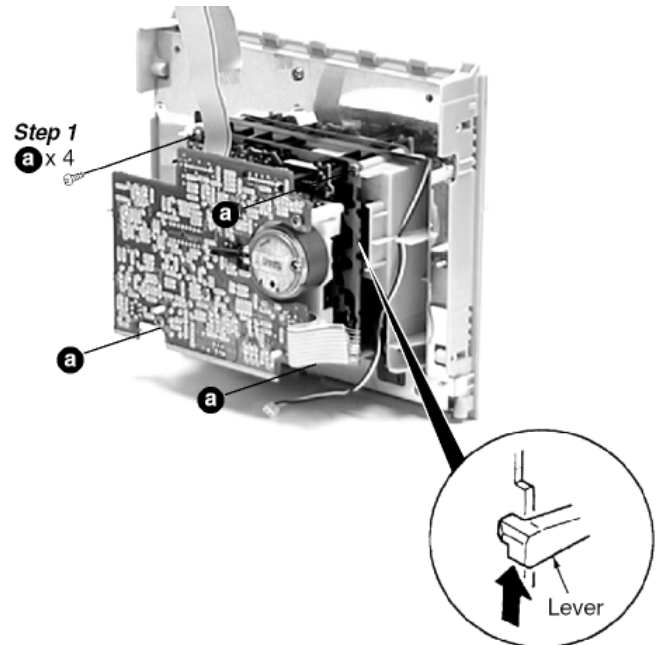


Step 7 Slide out the Optical Pick-up Unit from the indent opening.



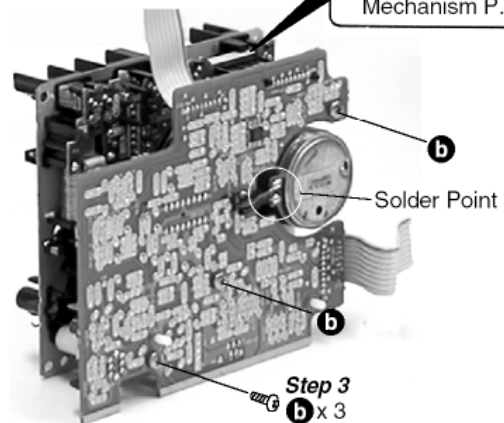
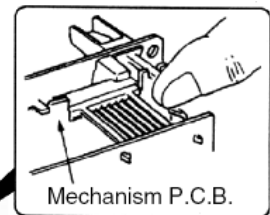
NOTE : Do not touch the Lense on the OPU.

8.3.2. Removal of the Deck P.C.B. and Mechanism P.C.B. for replacing parts.



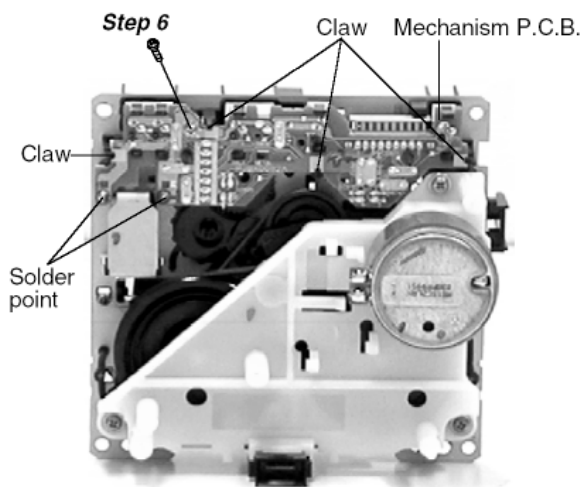
Step 2 Push the lever upward to open the cassette lid and remove the deck unit.

Note : When removing the Deck P.C.B., remove it holding the Mechanism P.C.B.



Step 4 Desolder the motor wires.

Step 5 Remove the Deck P.C.B.

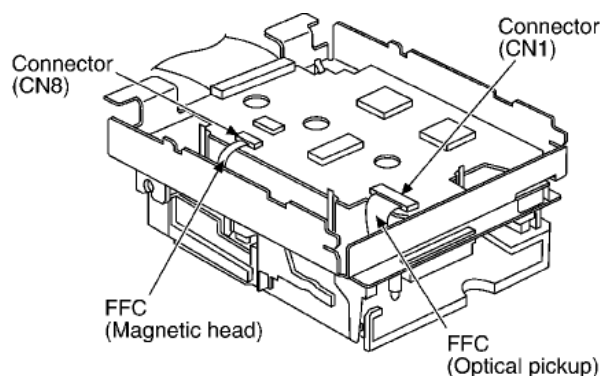


Step 7 Desolder the plunger terminals.

Step 8 Release the 4 claws and remove the Mechanism P.C.B.

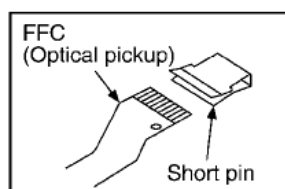
8.3.3. Replacement for the Magnetic Head and Optical Pick-up.

Step 1 Remove the 2 FFCs from the connector.



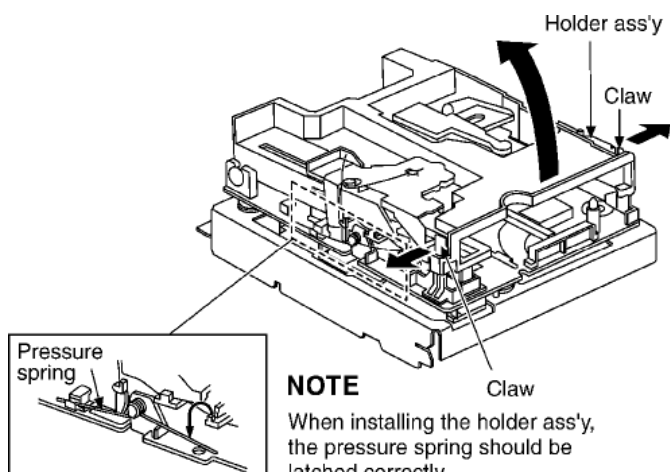
NOTE

Insert a short pin into the traverse unit FFC board.
(Refer to "Handling Precautions for Traverse deck".)

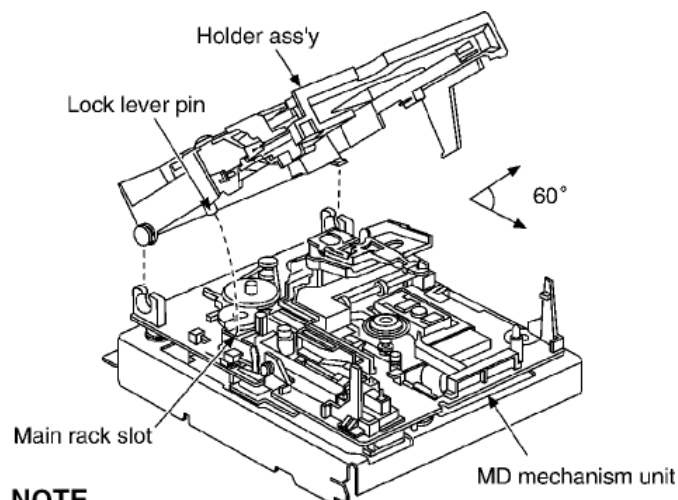


Step 2 Remove the pressure spring from latch.

Step 3 Release the 2 claws and then lift up the holder ass'y.



Step 4 Set the holder ass'y and MD mechanism unit at a 60 degree angle and then pull out the holder ass'y.

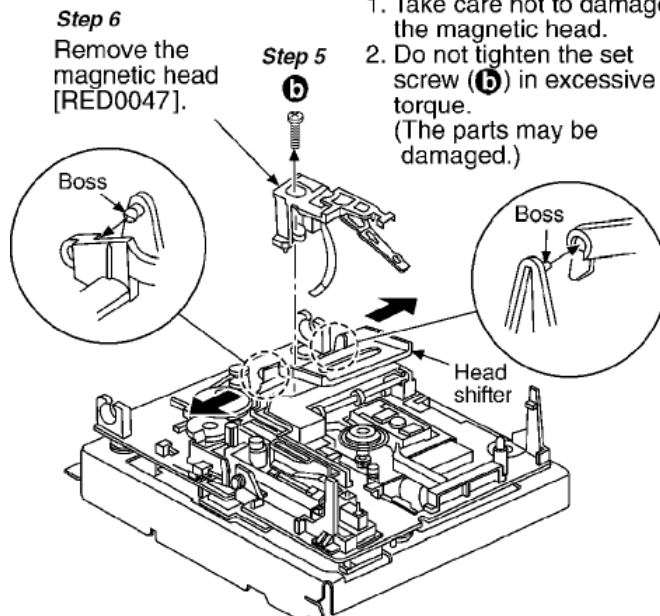


NOTE

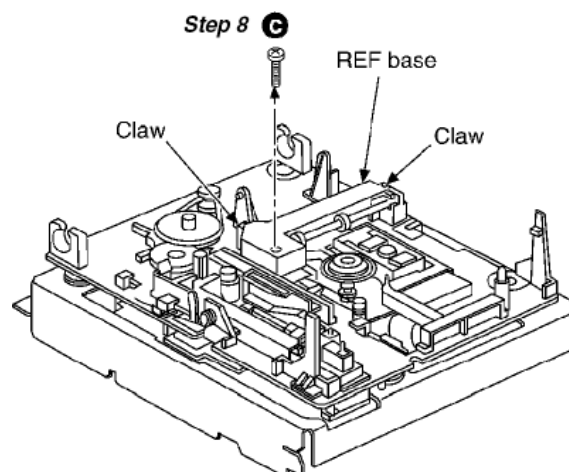
When installing the holder ass'y, align the lock lever pin with the main rack slot.

NOTE

1. Take care not to damage the magnetic head.
2. Do not tighten the set screw (b) in excessive torque. (The parts may be damaged.)



Step 7 Spread the lugs of head shifter and then release the lugs from boss.



Step 9 Release the 2 claws and then remove the REF base.

Step 10

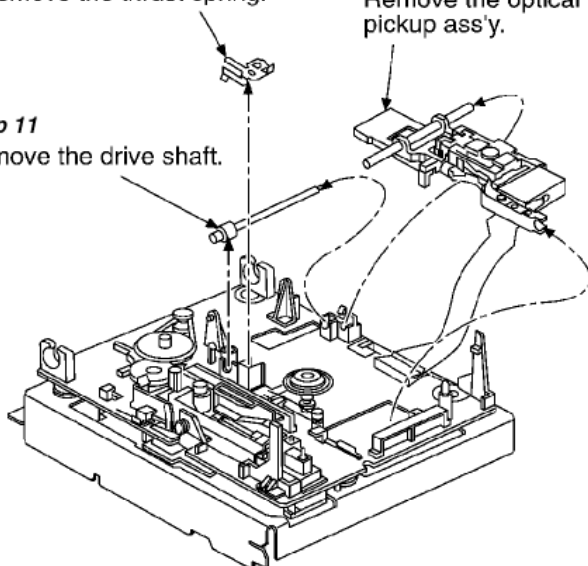
Remove the thrust spring.

Step 12

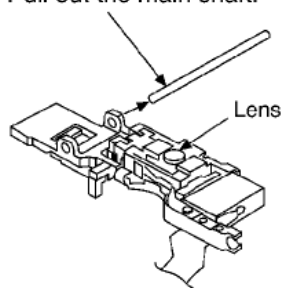
Remove the optical pickup ass'y.

Step 11

Remove the drive shaft.

**Step 13**

Pull out the main shaft.

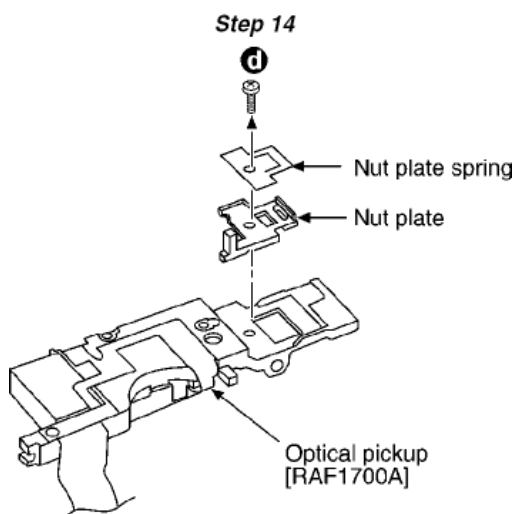
**NOTE**

1. Use care to prevent damage the optical pickup, due to the precision construction.
2. Do not apply the grease on the lens of optical pickup.
3. Do not touch the lens of the optical pickup.

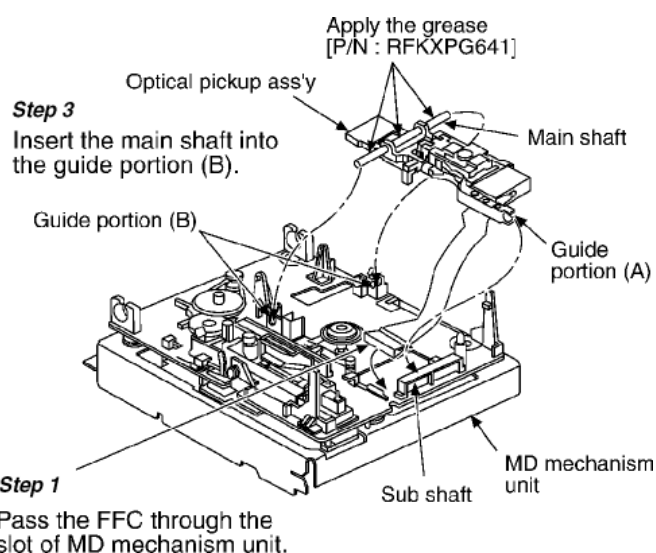
Step 14

Nut plate spring

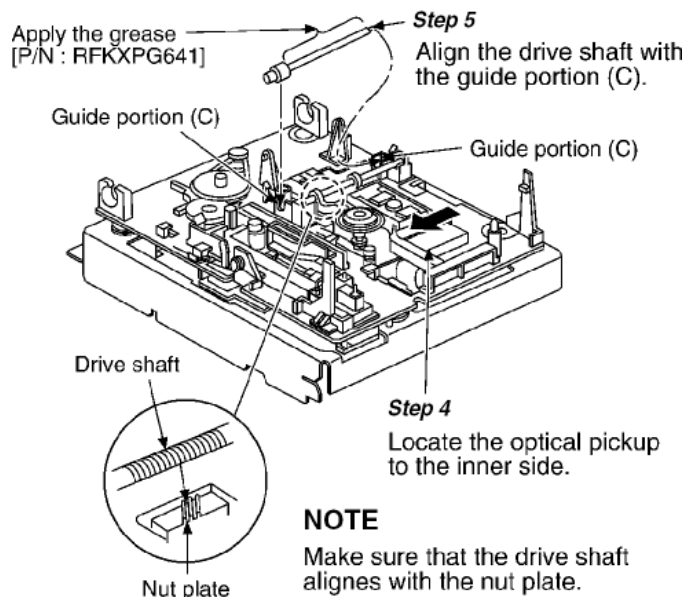
Nut plate

Optical pickup
[RAF1700A]

Step 15 Remove the nut plate spring and nut plate.

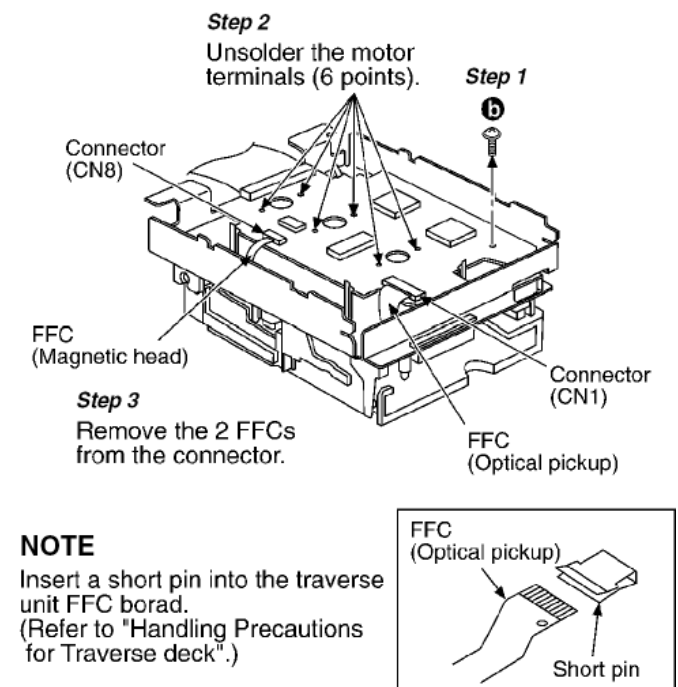
Notice for installing the optical pickup**Step 2** Align the guide portion (A) of optical pickup with the sub shaft.

Note : Take care not to bend the FFC.

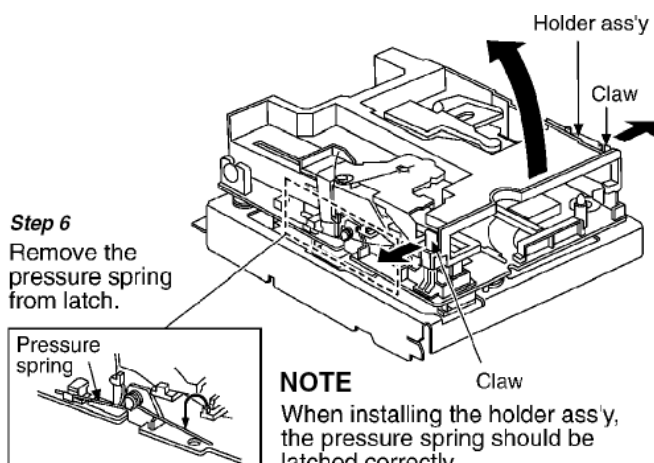
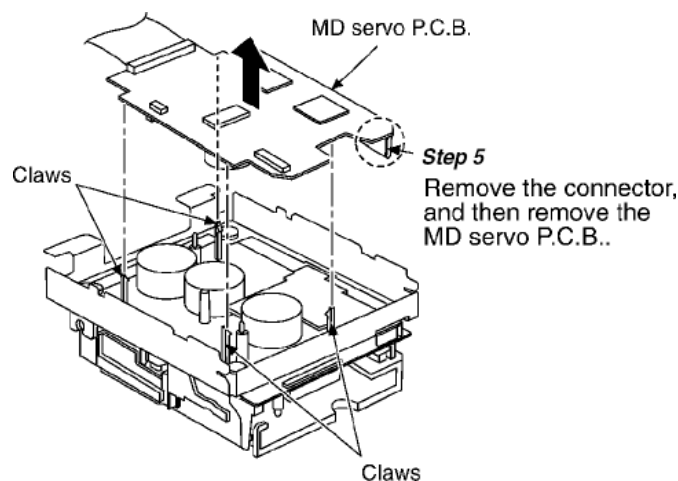
**NOTE**

Make sure that the drive shaft aligns with the nut plate.

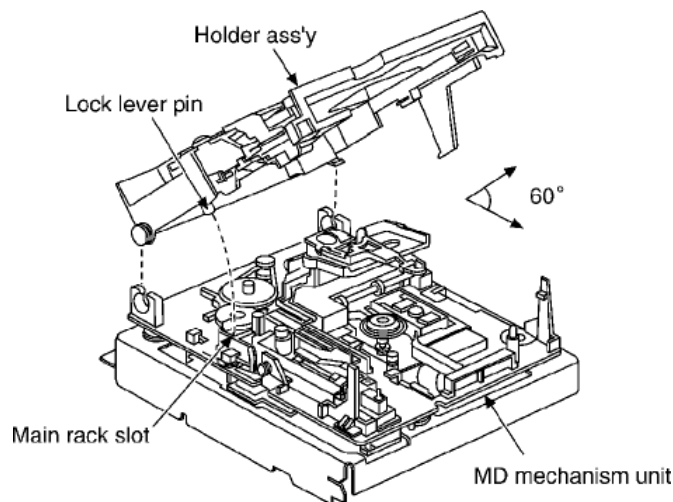
8.3.4. Replacement for the Belt and Loading Motor Assembly



Step 4 Release the 4 claws.

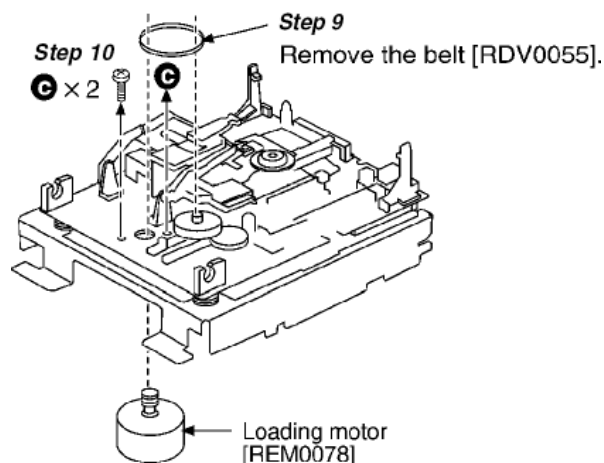


Step 7 Release the 2 claws and then lift up the holder ass'y.

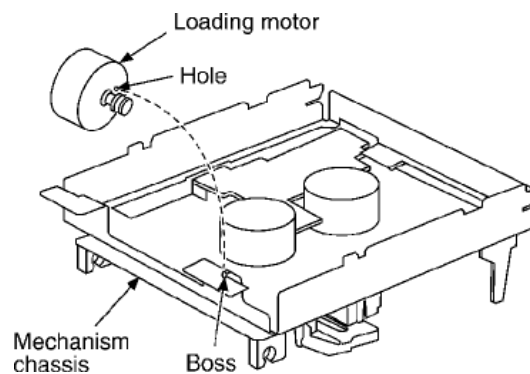


Note : When installing the holder ass'y, align the lock lever pin with the main rack slot.

Step 8 Set the holder ass'y and MD mechanism unit at a 60 degree angle, and then pull out the holder ass'y.



Notice for installing the loading motor



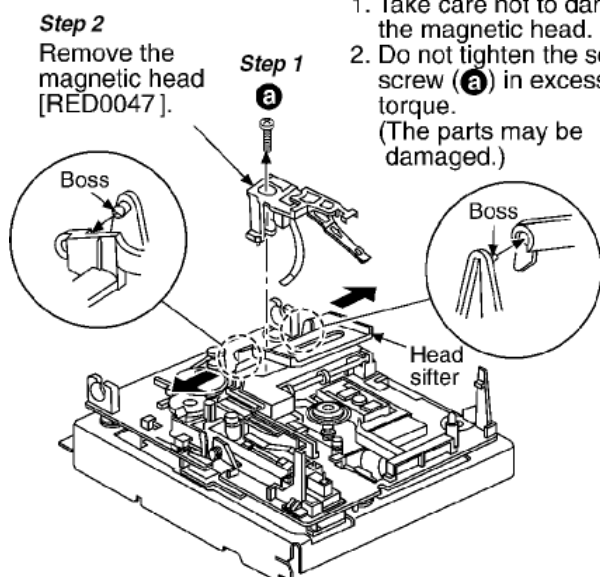
- Align the hole of loading motor with the boss of mechanism chassis and then install the loading motor.

8.3.5. Replacement for the Traverse Motor Assembly

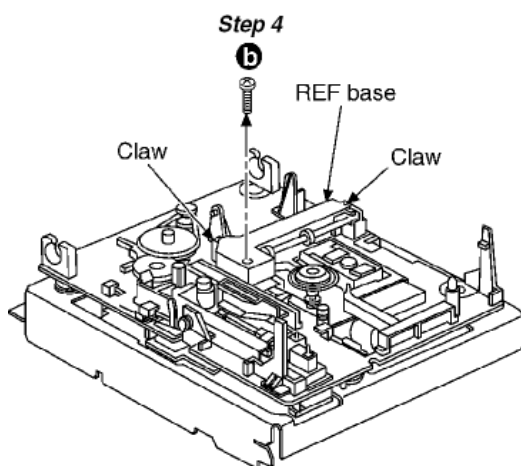
- Follow **Step 1 ~ Step 8** of item 1.3.4 in Main Component Replacement Procedures.

NOTE

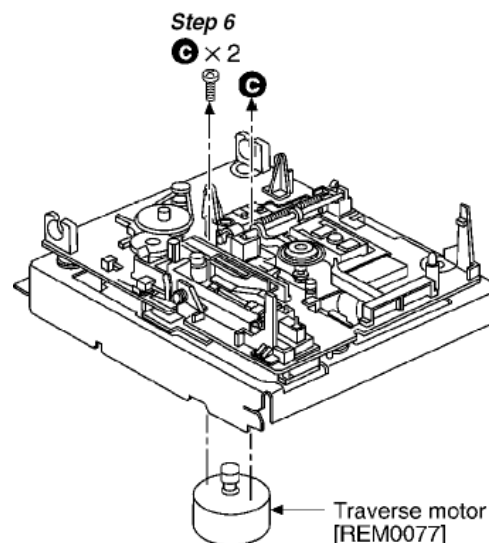
1. Take care not to damage the magnetic head.
2. Do not tighten the set screw (a) in excessive torque. (The parts may be damaged.)



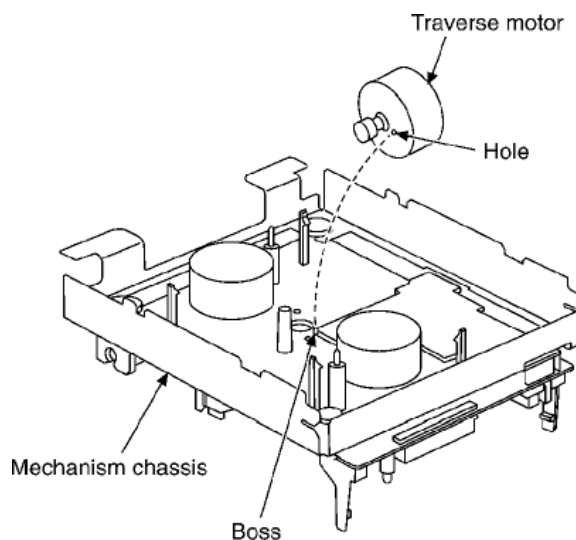
Step 3 Spread the lugs of head shifter and then release the lugs from boss.



Step 5 Release the 2 claws and then remove the REF base.

**Notice for installing the traverse motor**

- Align the hole of traverse motor with the boss of mechanism chassis and then install the traverse motor.



9 Self-Diagnostic Display Function

This unit is equipped with a self-diagnostic function which, in the event of a malfunction, automatically display a code indication the nature of the malfunction. Use this self-diagnostic function when servicing the unit.

9.1. Entering self-diagnostic Mode

1. Turn the power on.
2. Press CD play button with no CD, cassette or MD loaded.
3. Press and hold the STOP button for at least 2 seconds, and while still pressing the STOP button, press the Forward Skip/Search button for at least 2 seconds. The unit enters Self-Diagnostic Mode and display "TEST". Then an error code (e.g. H01) is displayed, if any. In the case of no error, "TEST" is displayed on FL.
4. If more than 1 error exists, the display will sequentially show the respective error codes each time the STOP button is pressed.

9.2. Cassette Mechanism Test (For error code H01, H02, H03, H06, F01, F02)

1. Load a cassette tape with the erasure prevention tab, remove from left side only and close the cassette holder.
2. Press "Forward Skip/Search" (Tape will be stop after 2 seconds).
3. Load a cassette tape with the erasure prevention tab, remove from right side only and close the cassette holder.
4. Press "Reverse Skip/Search" (Tape will be stop after 2 seconds).
5. Load a pre-recorded tape with both side record tabs intact and close the cassette holder.
6. Press "Tape Play" (After TPS function, tape will stop automatically).
7. Press "Tape Record" (Tape will not move).

8. Press "Stop" to indicate Error code.ve).
- If several problem exist, error code will change each time when "Stop" is pressed.
(e.g. H01 → H03 → F01 etc.)

9.3. Clearing all error code

1. Press and hold STOP button for 5 seconds.

9.5. Description of error code

9.5.1. Power Amplifier Failure (F76)

When power amplifier output failure for power supply failure.

9.5.2. Error detection for CD Block

Error Code	Problem Condition	Possible Cause
F15	CD does not function	REST SW detection error. This error occurs when the Optical Pick Up REST SW (S701) is not detected within the specified time. (about 8 seconds).
H15	The CD tray closes	CD disc tray detect switch NG. (Check and replace)
F26	CD does not function	Transmission error between CD servo LSI and micon. This error occurs between CD servo LSI and micon. This error occurs when the POWER is ON for the CD block and an error is detected after the transmission has started.

9.5.3. Error detection code for MD block

Error Code	Problem Condition	Possible Cause
MD F15	Interval till MD starts playing is too long	Pickup home position sense switch (S8) is defective; check and replace if necessary.
MD F26	MD is loaded but cannot be played	Communication error between the servo processor IC and the microprocessor IC (system control). Check if the flexible circuit board is disconnected. Displayed when the disc is scratched too.
F22	MD cannot be loaded	MD loading motor or MD loading mechanism error; check and replace.
F28	MD cannot be loaded	Confirm that the disc is not catching on anything. The connection (flexible circuit board or connector cable) between the MD unit and the MD servo circuit board is disconnected or damaged; check and replace if necessary. The MD unit may be malfunctioning; replace it.
F29	MD cannot be ejected	Confirm that the disc is not catching anything. The connection (flexible circuit board or connector cable) between the MD unit and the MD servo circuit board is disconnected or damaged; check and replace if necessary. The MD unit may be malfunctioning; replace it.

9.5.4. Error detection code for Cassette Mechanism Block

Error Code	Problem Condition	Possible Cause
H01	Cassette deck malfunctions	MODE SW detection error. Faulty contact or short circuit of mechanism mode switch. (S971)
H02	Recording not possible	REC INH SW detection error. Faulty contact or short circuit of REC INH switch. (S974, S975)
H03	Playback cannot perform.	HALF SW detection error. Faulty contact or short circuit of HALF switch. (S972)
H06	No treble is produce when a normal tape is CrO2 SW detection error played or recorded. Excessive treble is produces when a CrO2/Metal tape is played, or the recorded treble is distorted and at a low level.	CrO2 SW detection error. Faulty contact or short circuit of CrO2 switch (S973).
F01	The tape advances slightly and then stops.	Reel pulse detection error. Faulty reel pulse, faulty hole detect IC. (IC971)
F02	Cassette deck will not perform TPS function	Faulty TPS drive IC. (IC303)

2. FL indicator shows "CLEAR" for 1 second and change to "TEST".

9.4. Cancelling the Self-Diagnostic mode

1. Press the "Power" button to turn off the system. Press the "Power" button again to turn on the system.

10 Measurement and Adjustment

10.1. Cassette Deck Section

Measurement condition

- Record timer : OFF
- Make sure head, capstan and pressure roller are clean.
- Judgeable room temperature 20 ± 5 °C (68 ± 9 °F)

Measuring instrument

- EVM (Electronic Voltmeter)
- Digital frequency counter

Test tape

- Headazimuth adjustment (8 kHz, -20 dB); QZZCFM
- Tape speed adjustment (3 kHz, -10 dB); QZZCWAT
- Playback gain adjustment (315 Hz, 0 dB); QZZCFM
- Normal reference blank tape; QZZCRA
- CrO2 blank tape; QZZCRX

10.1.1. Head Azimuth Adjustment

Note :

If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (Shown in Fig. 1)

1. Connect the measuring instrument as shown in Fig. 2.
2. Replace azimuth screws for both forward and reverse direction after removing the screw-locking bond left on the head base.

(Supply part No. of azimuth adjusting screw: **RHD17015**)

3. Playback the azimuth adjustment portion (8kHz, -20dB) of test tape (QZZCFM). Adjust the azimuth adjusting screw until the outputs of the L/Rch are maximized. (Refer to Fig. 3)

Make sure that the difference in the peak level between the left and right channels does not exceed 0.5dB.

4. Perform the same adjustment in reverse playback mode.

Check of the level difference forward and reverse directions

5. Playback the playback gain adjustment portion (315Hz, 0dB) of test tape (QZZCFM). Check if level difference between forward and reverse direction is within 1.5dB.
6. After the adjustment, apply screwlock to the azimuth adjusting screw.

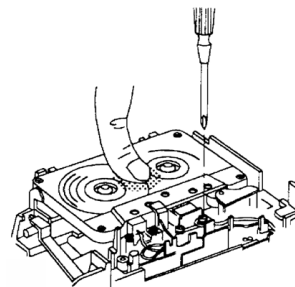


Fig. 1

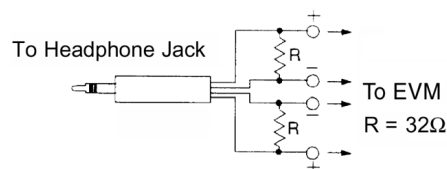


Fig. 2

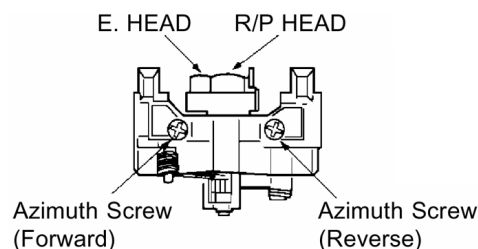


Fig. 3

10.1.2. Tape Speed Adjustment

Normal speed (Standard value : 3000 ± 90 Hz)

1. Connect the measuring instrument as shown in Fig. 4.
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust motor VR for the output value shown below. (Refer to Fig. 5)

Adjustment target : 3000 ± 40 Hz

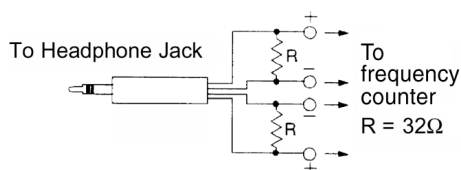


Fig. 4

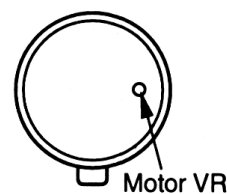


Fig. 5

10.1.3. Bias Vlotage Check

1. Connect the measuring instrument as shown in Fig. 6.
2. Set the unit to "AUX" position.
3. Insert the normal blank tape (QZZCRA) and set the unit to "REC" mode (use "●REC/STOP" key).
4. Measure and make sure that the output is within the standad value.

Standard value : $16 \pm 3\text{mV}$

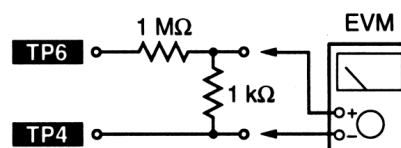


Fig. 6

10.1.4. Bias Frequency Check

1. Connect the measuring instrument as shown in Fig. 7.
2. Set the unit to "AUX" position.
3. Insert the normal blank tape (QZZCRA) and set the unit to "REC" mode (use "●REC/STOP" key).
4. Measure and make sure that the output is within the standard value.

Standard value : $98 \pm 8\text{kHz}$

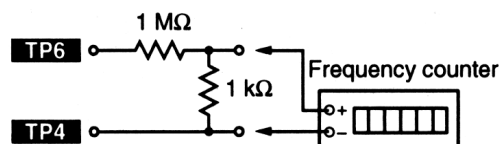


Fig. 7

10.2. Tuner Section

10.2.1. AM-IF Alignment

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 3)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	450kHz 30% Mod. at 400Hz	Point of non-interference. (on about 600kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	Z102 (AM IFT)	Adjust for maximum output

10.2.2. AM-RF Alignment

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 3)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	522kHz	Tuning capacitor fully closed	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	Z101 (AM OSC Coil)	Adjust for maximum output
	603kHz	Tuning to signal		Z101 (AM ANT Coil)	

10.3. Alignment Points

<Cassette Deck>

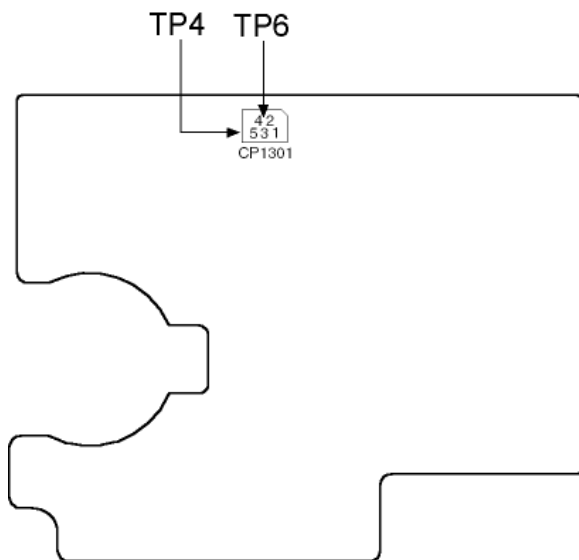


Fig. 8

<Tuner>

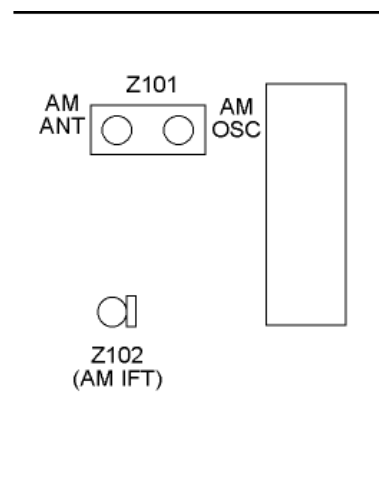


Fig. 9

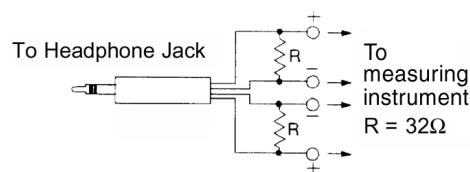


Fig. 10

10.4. Laser Power Adjustment

Adjust each laser power : read power for reading (play) and write power for writing (record).

10.4.1. Necessary Instruments

- Laser power meter (Advantest TQ8210 or compatible meter)
- Test disc (Pre-mastered disc RFKV0006 or RFKV0014)
- Recordable disc available on sales root (with music recorded)
- Insulated driver for adjustment such as a ceramic driver
- Jitter meter

10.4.2. Set the Unit to the Adjustment Mode

1. Perform the item "8.1.6. Checking for the MD Servo P.C.B." in "Operation Check and Main Component Replacement Procedures", Step 1 to Step 4.
2. Turn the power on.
3. Press CD play button with no CD, cassette or MD loaded.
4. While pressing STOP on the unit, press 4 followed by 7 on the remote. Display will now show CD E no disc, MD E no disc or TAPE E (E is shown by 3 horizontal bars)
5. Pressing STOP will toggle between these displays. With MD E no disc in the display, continue with 10.4.3.

Cautions

1. About handling the MD unit

- The magnetic head is a precision unit and is very

fragile. Do not deform it.

- Laser diode in the optical pickup may be destroyed by the static electricity generated in your clothes or body. Be especially careful with the static electricity.
- The optical pickup is structured extremely precisely. Do not subject to the strong impact or shock. Do not touch the lens.

2. About handling the magnetic head

When replacing the magnetic head, do not tighten the mounting screw (RHD17022) too firmly. If the screw is tightened too much to deform the resin, the position of the head is moved, and this affects its recording operation.

Recommended torque for mounting screw: 700 g cm +/- 100 g cm

Reference: This is the same force as using a screwdriver with a 15-mm diameter grip, you fasten the screw naturally with your thumb and index finger.

3. About the driver for adjusting laser power

Use only insulated driver such as a ceramic driver. With the metal driver, it is not possible to adjust properly because of the induction noise. Also, if it short-circuits with the chassis, it may destroy or damage the laser diode.

Recommended driver: VESSEL 9000 1.8 -30 (Ceramic driver)

Cautions on optical pickup:

- The optical pickup and the magnetic head are structured precisely; therefore, they are very fragile. Be

careful not to touch them with the edge of the laser power meter.

- The sensor of the laser power meter is a very fine part. Be careful not to touch it to the optical pickup lens.
- The focus point of the laser reaches to 356°F. Therefore, avoid adjusting using laser power for a long time because the sensor of the laser power meter may be burned.
- Do not allow the write power to even momentarily reach or exceed 5.5 mW. Doing so will result in damage to the optical pickup.
- Do not set the unit to the laser power adjustment mode with the MD loaded. Doing so may result in damage to the MD.

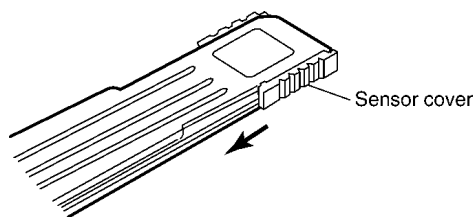
10.4.3. Adjustment Procedure

1. Enter "1" using numeric pad on the remote control with no MD loaded.

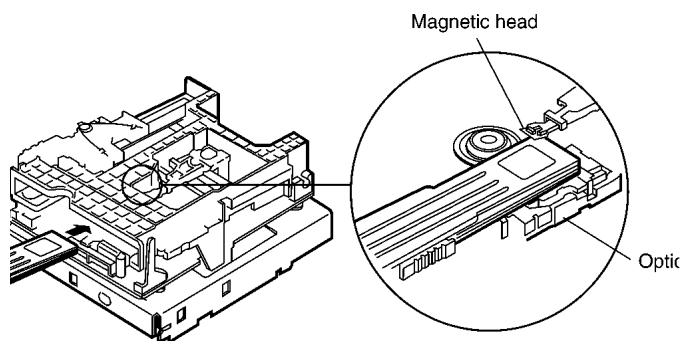
→ FL display "Rough ADJ".

(Read power adjustment mode)

2. Slide sensor cover on the laser power meter. (Fig. 1)

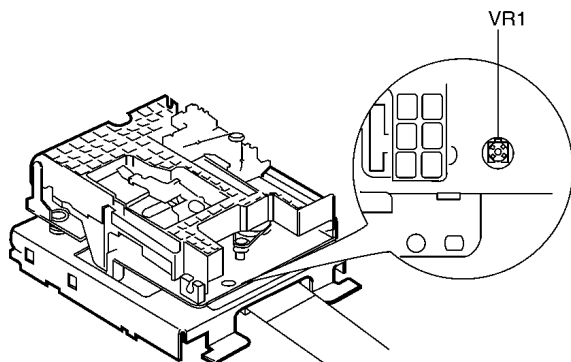


3. Place the sensor on the laser power meter right on top of the optical pickup. (Fig. 2)



4. Confirm that the reading of the laser power meter is within the standard value. If the value is out of the range, adjust VR1. (Fig. 3)

Standard value (read power) : 600μW or lower



Cautions

Proceeding on to the subsequent adjustment procedure with the read power exceeding 650μW will result in damage to the optical pickup.

5. Press "MEMORY/ENTER" button on the unit.

→ FL display "ROUGH ADJ.OK" flash for 3 times and display the next indication.

→ FL display "FINE ADJ"

(Write power adjustment mode)

6. Adjust VR1 until reading the standard value. (Fig. 3)

Standard value (write power) : 4.8 mW +/- 0.1mW

Cautions

Do not allow the write power to reach or exceed 5.5mW even for a moment. Doing so will result in damage to the optical pickup.

7. Press "MEMORY/ENTER" button on the unit.

→ FL display "FINE ADJ.OK" flash for 3 times and display the next indication.

→ FL display "ROM-D.CHECK"

(ROM data check mode)

8. Confirm that the reading of the laser power meter is within the standard value.

Standard value (ROM data laser power): 540-660uW

9. Press "MEMORY/ENTER" button on the unit.

→ FL display "RAM-D.CHECK"

(RAM data check mode)

10. Confirm that the reading of the laser power meter is within the standard value.

Standard value (RAM data laser power) 540-660uW

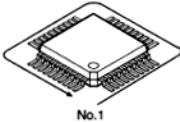
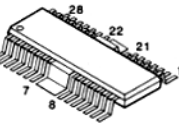
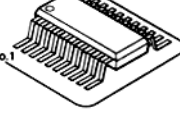
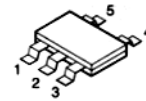
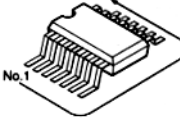
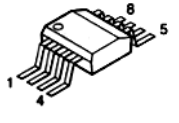
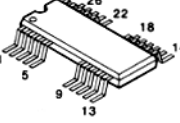
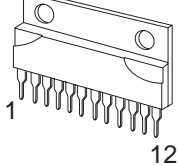
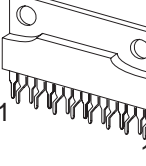
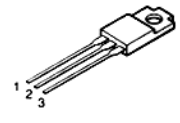
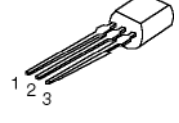
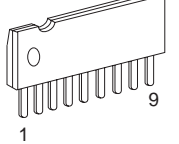
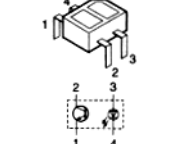
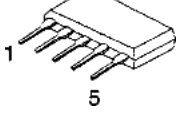
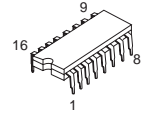
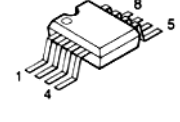
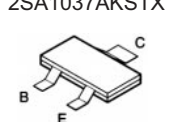
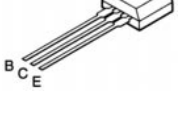

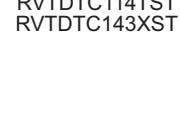
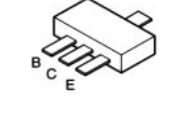
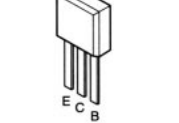
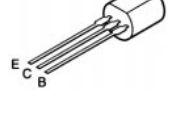
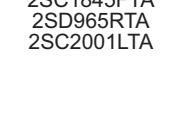
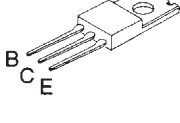
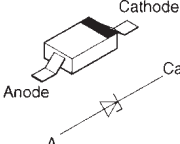
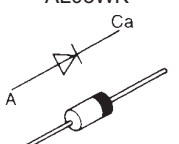
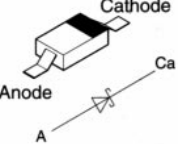
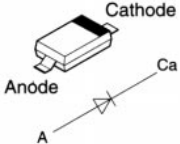
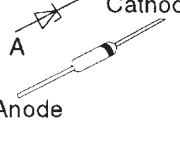
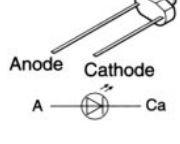
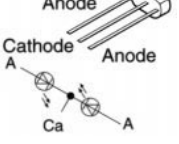
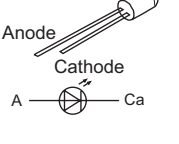
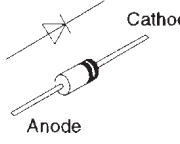
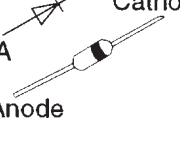
11. Press "EJECT" to cancel adjustment mode, then press "POWER" button to turn off the power.

Note : If the value in step 8 and step 10 is out of standard value, turn off the power and readjust from the beginning.

Caution

Upon completion of adjustment, make sure to perform reset operation.

11 Illustration of IC's, Transistors and Diodes

 <p>No.1</p>	AN8772FHQ (48P) MN66616RA4 (100P) MNBDF03DAA1 (80P) M9202-01BDR3 (64P) MN66279ORSC (80P) MN101C12GRB1 (100P)	 <p>28 22 21 15 7 8 14</p>	 <p>No.1</p>	AK4518VF-E2 (24P) LB1830MS-TLM (10P) LA1833MN-TLM (24P) LC72131MDTRM (20P) BU4052BCF-E2 (16P) BH3857AFV-E2 (40P) AN8837SBE1	 <p>5 4 1 2 3</p>	RN5RG33AA-TL RN5RZ26BA-TR					
 <p>No.1</p>	TC74HCT00AFL (14P) TC74HCT7007A (14P) TC4050BF (16P)	 <p>8 5 1 4</p>	 <p>26 22 18 14 5 9 13</p>	MNV4400-T8T	 <p>12</p>	AN7135	 <p>16</p>	AN7194K-LD			
 <p>1 2 3</p>	UPC29M33HF	 <p>1 2 3</p>	XC62CP3302TH	 <p>9 1</p>	BA6283N	 <p>4 3 2 1 4</p>	0N2180RLC1	 <p>5</p>	BA7755A	 <p>9 8 16 1</p>	TA8142AP
 <p>8 5 1 4</p>	BA4558FE2	 <p>C B E</p>	2SB1295-6-TB DTC114YETL 2SB1462STX 2SA1037AKSTX	 <p>B C E</p>	2SC1740SRTA 2SC2787LTA RVTDTA114EST RVTDTA144EST 2SC1740SLNST RVTDTA143EST RVTDTA114EST RVTDTA114YST RVTDTA144EST	 <p>2 3 2 1 4</p>	RVTDTA143XST RVTDTA143TST RVTDTA124TST RVTDTA114TST RVTDTA143XST	 <p>G D S</p>	2SJ278MYTR 2SK1764KYTR		
 <p>B C E</p>	2SB1121ST-TD	 <p>E C B</p>	2SA1309ARTA 2SB1030RTA	 <p>E C B</p>	2SD592ARTA 2SB621ARTA 2SA952LTA 2SC1845FTA 2SD965RTA 2SC2001LTA	 <p>B C E</p>	2SB1566E	 <p>B C E</p>	2SJ498CTA		
 <p>Cathode Anode A</p>	MA8056MTX	 <p>Ca A</p>	RL1N4003N02 1D3E AL03WK	 <p>Cathode Anode A</p>	MA728TX	 <p>Cathode Anode A</p>	SC80209TE12R	 <p>Ca A Cathode Anode</p>	MTZJ5R1BTA MTZJ4R7BTA MTZJ5R6BTA MTZJ8R2BTA MTZJ7R5BTA MTZJ30BTA MTZJ16BTA		
 <p>Anode Cathode A Ca</p>	SLR325VCT31	 <p>Anode Cathode A Ca</p>	SPR325MVWT31	 <p>Anode Cathode A Ca</p>	LNW9A8BYBZ	 <p>Ca Cathode A Anode</p>	SB360L6508	 <p>Ca Cathode A Anode</p>	RVD1SS133TA 1SS291TA MA165TA RB441Q40T77		

12 Terminal Function of IC's

12.1. IC1 (AN8772FHQ) : RF AMP

Pin No.	Mark	I/O	Function
1	CENV D	—	D signal det. capacitor connection terminal
2	LDO	O	Laser amp output terminal
3	APCPD	I	Photo diode light quantity det. input terminal
4	LD IN	I	Laser amp reverse input terminal
5	APC REF	I	APC amp criterion voltage input terminal
6	TEMP IN	I	Temperature sensor amp input terminal
7	TEMP	O	Temperature sensor amp output terminal
8	ADIP	O	ADIP signal output terminal
9	TOFS	I	Tracking error offset adjustment terminal
10	TBAL	I	Tracking ballance adjustment terminal
11	TE	O	Tracking error signal output terminal
12	CRS IN	I	Track cross input terminal
13	TGAIN	I	Tracking gain adjustment input terminal
14	LNP	O	Lens position signal output terminal
15	AB GAIN	I	APP compensation signal gain adjustment terminal
16	FE	O	Focus error signal output terminal
17	AS GAIN	I	AS gain adjustment terminal
18	FBAL	I	Focus ballance adjustment terminal
19	AS/MON3T	O	AS/3TMON signal output terminal
20	CEA	I	3T envelope det. capacitor connection terminal
21	BDO/TRCR S	O	BDO/Track cross signal output terminal
22	CBD O	O	BDO detection capacitor connection terminal

Pin No.	Mark	I/O	Function
23	OFT O	O	Off track detection signal output terminal
24	GND	—	GND terminal
25	OFT IN	I	Off track detection signal input terminal
26	VCC	I	Power supply terminal (+3V)
27	NRFDET/ OFTR	O	NRFDET/off track signal output terminal
28	NRFLD	I	Serial command latch signal input terminal
29	RF DATA	I	Serial command data signal input terminal
30	RFCK	I	Serial command clock input terminal
31	NRFSTBY	I	Standby control signal input terminal
32	OUT RF	O	EFM signal output terminal
33	CRF AGC	—	RFAGC capacitor connection terminal
34	EQ IN	I	EQ input terminal
35	ARFO	O	RF amp. output terminal
36	SVREF	I	Reference voltage input terminal
37	VREF	O	Reference voltage output terminal
38	RF1	I	RF1 signal input terminal
39	RF2	I	RF2 signal input terminal
40	F1	I	F1 signal input terminal
41	F2	I	F2 signal input terminal
42	CLPF1	—	APP compensation LPF capacitor connection terminal
43	CLPF2	—	RF equalizer adjustment resistor connection terminal
44 ~47	A ~D	I	Beam A~D signal input terminal
48	CENV C	—	Beam E signal detection capacitor connection terminal

12.2. IC2 (AN8814SB-E1) : FOCUS/TRACKING COIL, SPINDLE/TRVERSE MOTOR DRIVE

Pin No.	Mark	I/O	Function
1	REG B	—	3.3V external transistor control terminal (Not used, open)
2	REG M	—	3.3V regular output monitor terminal (Not used, connected to GND)
3	NC	—	Not used, open
4	OPO	O	Op-amp output terminal
5	OP-	O	Op-amp invert output terminal
6	OP+	O	Op-amp non-invert output terminal (Not used, connected to GND)
7	Vcc	I	Power supply terminal
8	1/2 PVcc2	O	1/2 PVcc output terminal 1 (Connected to GND through capacitor)
9	PVcc2	I	Power supply terminal for driver
10	PGND2	—	GND terminal
11	VO4-	O	Tracking coil driver output terminal
12	VO4+	O	Tracking coil driver output terminal
13	VO3-	O	Focus coil driver output terminal
14	VO3+	O	Focus coil driver output terminal
15	VO2-	O	Traverse motor drive output terminal
16	VO2+	O	Traverse motor drive output terminal
17	VO1-	O	Spindle motor drive output terminal
18	VO+	O	Spindle motor drive output terminal
19	PGND	—	GND terminal
20	PVcc1	I	Power supply terminal

Pin No.	Mark	I/O	Function
21	1/2 PVcc1	O	1/2 PVcc output terminal 1 (Connected to GND through capacitor)
22	VREF	I	Reference voltage input
23	IN1	I	Spindle motor drive input terminal
24	PC1	I	Power cut 1 input terminal
25	IN2	I	Traverse motor drive input terminal
26	PC2	I	Power cut 2 input terminal
27	IN3	I	Focus drive input terminal
28	IN4	I	Tracking drive input terminal

12.3. IC3 (MN66616RA4) : ATRAC ENCODER/DECORDER, SERVO SIGNAL PROCESSOR

Pin No.	Mark	I/O	Function
1	ADIP	I	ADIP FM signal input terminal
2	LNP	I	Lens position signal input terminal
3	FE	I	Focus error signal input terminal
4	TE	I	Tracking error signal input terminal
5	AS	I	AS signal input terminal
6	DRMONI	I	Drive voltage monitor input terminal
7	BAT	I	Battery power supply terminal
8	AMONI	—	Servo analog monitor signal output (Not used, poen)
9	VREFI	I	Reference voltage input terminal
10	TOFS	O	Tracking off-set adjustment output terminal
11	FBAL	O	Focus balance adjustment output terminal
12	TBAL	O	Tracking balance adjustment output terminal
13	TGAIN	O	TE error gain adjustment output terminal
14	ASGAIN	O	Main beam amp gain adjustment output terminal
15	ABGAIN	O	APP adjustment output terminal
16	AV _{DD} 1	I	Power supply terminal
17	AV _{SS} 1	—	GND terminal
18	FOD	O	Focus drive signal output terminal
19	TRD	O	Tracking drive signal output terminal
20	TVD	O	Traverse motor drive signal ouput terminal
21	SPD	O	Spindle motor drive signal output terminal
22	SPON	O	Drive IC spindle ON signal output terminal
23	TVON	O	Drive IC traverse ON signal output terminal
24	DV _{DD} 0	I	Power supply terminal
25	FG	I	FG input terminal
26	NRECT	O	Rec/Play switching signal output terminal
27	IVDD2	—	Power supply terminal for I/O pad
28	IVDD0	—	Power supply terminal for I/O pad
29	DVss0	—	GND terminal
30~32	RAD12~RAD10	—	DRAM address output terminal (Not used, open)
33~42	RAD9~RAD0	O	DRAM address output terminal
43~46	RDT3~RDT0	I/O	DRAM data input/output terminal
47	NRAS	O	DRAM row address strobe output terminal
48	NCAS	O	DRAM culum address strobe output terminal
49	NWE	O	DRAM write enable output terminal
50	NRST	I	Reset signal input terminal
51	SELAD	I	MSP/MDA,I/F address select input terminal ("H" Address)
52	SSCK	I	MSP/MDA,I/F clock input terminal
53	SSDW	I	MSP/MDA,I/F write data input terminal
54	SSDR	O	MSP/MDA,I/F read data output terminal
55	MDISY	O	Leader synchronous signal output
56	SCTSY	O	ADIP synchronous noise output terminal
57	SGSYNC	O	Frame synchronous signal output terminal
58	DVDD1	I	Power supply terminal
59	IVDD1	—	Power supply terminal for I/O pad

Pin No.	Mark	I/O	Function
60	DVss1	—	GND terminal
61	FS384	O	384 Fs output terminal
62	SCL	O	Bit clock output terminal
63	SWS	O	Word clock output terminal
64	SDAP	O	Audio data output terminal
65	SDAR	I	Audio data input terminal
66	LRCK	I	CD word clock input terminal (Connected to GND)
67	BCK	I	CD bit clock input terminal (Connected to GND)
68	DATA	I	CD data input terminal (Connected to GND)
69	TX	O	Digital audio interface signal output terminal (Not used, open)
70	RX1	I	Digital audio interface signal 1 input terminal
71	RX2	I	Digital audio interface signal 2 input terminal
72	NREFM	—	EFM modulation inverted output (Not used, open)
73	REFM	O	EFM modulation output terminal
74	MONI3	—	Monitor signal output (Not used, open)
75	MONI2	—	Monitor signal output (Not used, open)
76	MONI1	—	Monitor signal output (Not used, open)
77	MONI0	—	Monitor signal output (Not used, open)
78	TS3	—	Not used, connected to GND
79	TS2	—	Not used, connected to GND
80	TS1	—	Not used, connected to GND
81	TS0	—	Not used, connected to GND
82	EXSYSCK	—	External system clock input terminal (Not used, connected to GND)
83	DVDD2	I	Power supply terminal
84	X1	I	Crystal oscillator input terminal (F=16.9344MHz)
85	X0	O	Crystal oscillator output terminal (F=16.9344MHz)
86	VDss2	—	GND terminal
87	RFDAT	O	RF serial data output terminal
88	RFCK	O	RF serial clock output terminal
89	NRFLD	O	RF serial load output terminal
90	TRCRS	I	Track cross input terminal
91	OFTR	I	Off-track signal input terminal
92	APCD	O	Laser power PWM output terminal
93	EXEFMCK	I	External FM clock input terminal (Not used, connected to GND through registor)
94	PEFM1	O	EFM loop filter output terminal
95	EEMIREF	I	EFM PLL reference current input terminal
96	EEMPLL	O	EFM PLL filter output terminal
97	PEFMS	I	EFM signal input terminal
98	AV _{DD} 0	I	Power supply terminal
99	AVss0	—	GND terminal
100	TEFSEL	—	Not used, open

12.4. IC10 (MNBDF03DAA1) : SYSTEM CONTROL

Pin No.	Mark	I/O	Function
1	DACRST	O	DAC reset signal output terminal to IC4 ("L":Reset)
2	DEO	O	DE emphasis signal output terminal to IC4("L":DE emphases)
3	MUTE	—	AD-DA mute output terminal (Not used, open)
4	AD RST	O	Reset signal output terminal
5	NRFSTBY	O	Standby control signal output terminal ("L":Standby)
6	PC	O	Transistor drive signal output terminal ("H":Power ON)
7	MSP RST	O	MSP reset signal output terminal ("L":Reset)
8	LOAD1	O	Loading motor drive 1 output terminal
9	LOAD0	O	Loading motor drive 0 output terminal
10	NEFMON	O	Magnetic head current output terminal
11	TEST01	O	Test signal output terminal (Not used, open)
12	TVSW	I	Traverse innermost detection switch signal input terminal
13	DISC IN	I	Disc detection switch signal input terminal
14	REFLECT	I	Reflection rate switch signal input terminal
15	LOAD SW0 (OPEN)	I	Loading mechanism position det. Switch 0 signal input terminal
16	LOAD SW1 (TRG)	I	Loading mechanism position det. Switch 1 signal input terminal
17	LOAD SW2 (PLAY/REC)	I	Loading mechanism position det. Switch 2 signal input terminal.
18	LOAD SW3 (PLAY)	I	Loading mechanism position det. Switch 3 signal input terminal
19	PROTECT	I	Erase prevention switch signal input terminal
20	MMOD	—	Connected to GND
21	RST	I	Reset signal input terminal ("L":Reset)
22	UNIT TEST	I	Test signal input terminal (Open)
23	CS2	I	Test signal input terminal (Open)
24	SCTSY	I	Micro computer interrupt signal input terminal (SUBQ/ADIP simultaneous signal)
25	MDISY	I	Micro computer interrupt signal input terminal (MD simultaneous signal)
26	PANEL REQ	I	Panel I/F request signal input terminal
27 ~29	LED OUT1 ~LED OUT3	O	Drive signal output terminal to LED DRIVE ("H":LED ON)
30	TEST02	O	Test signal output terminal (Not used, open)
31	V _{DD} 2(3V)	I	Power supply terminal (+3V)
32	OSC1	I	Crystal oscillator input terminal (f=10.02MHz)
33	OSC2	O	Crystal oscillator output terminal (f=10.02MHz)
34	V _{SS}	—	GND terminal
35	X1	I	Not used, connected to GND
36	X0	O	Not used, open
37	VSS	—	GND terminal
38	TEST03	O	Test signal output terminal (Not used, open)
39	EEPCS	O	EEPROM chip select signal output terminal (Not used, open)
40	EEPCK	O	EEPROM clock signal output terminal (Not used, open)

Pin No.	Mark	I/O	Function
41	EEPDATA	I/O	EEPROM data in/output terminal (Connected to GND through resistor)
42	TEST04	O	Test signal output terminal (Not used, open)
43	TEST05		
44	CFSYNC	I	ATRACK management frame simultaneous signal input terminal
45	TEST06	O	Test signal output terminal (Not used, open)
46	TEST07	I	Connected to rec/play switch signal
47	TOK OK	O	Not used, open
48	HF ON	—	Drive signal output terminal to Q3 (POWER SUPPLY CONTROL)
49	PANEL CLK	I	Panel I/F clock input terminal
50	PANEL DATA I	I	Panel I/F data input terminal
51	PANEL DATA O	O	Panel I/F data output terminal
52	PANEL CS	O	Panel I/F chip select output terminal
53	SELAD	O	Micro computer I/F address select output terminal
54	SSCLK	O	Micro computer I/F clock output terminal
55	SSDR	I	Micro computer I/F reading data input terminal
56	SSDW	O	Micro computer I/F writing data output terminal
57	LCDCK	O	LCD clock test signal output terminal (Connected to power supply through resistor)
58	ADRS TEST RXD	O	Test signal output terminal (Connected to power supply through resistor)
59	LCD DATA TXD	O	Test signal output terminal (Not used, open)
60	VREF-	—	Connected to GND
61	TEMP	I	Temperature sensor amp input terminal
62	KEY1	I	Key input 1 terminal
63	KEY2	I	Key input 2 terminal
64	MO LOAD	I	Test signal input terminal ("L":Without loading mechanism) (Open)
65	SRVTEST	I	Test signal input terminal ("L":Servo test mode) (Open)
66	LOAD P	I	Test signal input terminal (Open)
67	TEST KEY IN	I	Test signal input terminal ("L":Unit key mode) (Open)
68	SRV LOAD	I	Test signal input terminal ("L":Using for servo primary values EEPROM)
69	VCC 3V	I	Power supply terminal (+3V)
70	VCC 5V	I	Power supply terminal (+5V)
71	SELADDA	I	AD/DA converter select signal input terminal (Open)
72	SLOCK	O	Spindle lock test signal output terminal (Not used, open)
73	TLOCK	O	Tracking lock signal output terminal ("H":lock) (Not used, open)
74	FLOCK	O	Focus lock test signal output terminal ("H":lock) (Not used, open)
75	ERROR	O	Servo error test signal output terminal (Not used, open)
76	BUSY	O	Servo busy test signal output terminal (Not used, open)
77	SBPRETRY	O	Signal management retry test signal output terminal (Not used, open)
78	SRVRETRY	O	Servo retry test signal output terminal (Not used, open)
79	ARDSKIP	O	Address skip test signal output terminal (Not used, open)

Pin No.	Mark	I/O	Function
80	SPMWE	O	SPM take in test signal output terminal

12.5. IC72 (MNV4400-T8T) : 4M DRAM

Pin No.	Mark	I/O	Function
1	DO1	I/O	DRAM data 1 in/output terminal
2	DO2	I/O	DRAM data 2 in/output terminal
3	WE	I	DRAM light enable input terminal
4	RAS	I	DRAM low address strobe input terminal
5	A9	I	DRAM address 9 input terminal
9	A0	I	DRAM address 0 input terminal
10~12	A1~A3	I	DRAM address 1~3 input terminal
13	VCC	I	Power supply terminal

Pin No.	Mark	I/O	Function
14~18	A4~A8	I	DRAM address 4~8 input terminal
22	OE	I	DRAM output enable input terminal (Not used, connected to GND)
23	CAS	I	DRAM calam address strobe input terminal
24	DO3	I/O	DRAM data 3 in/output terminal
25	DO4	I/O	DRAM data 4 in/output terminal
26	VSS	—	GND terminal

12.6. IC701 (AN8837SBE1) Servo Amplifier

Pin No.	Mark	I/O	Function
1	PDE	I	Tracking signal input terminal 1 (E ch)
2	PDF	I	Tracking signal input terminal 2 (F ch)
3	VCC	I	Power supply connection
4	PDA	I	Focus signal input terminal 1 (A ch)
5	PDB	I	Focus signal input terminal 2 (B ch)
6	LPD	I	Laser PD connection
7	LD	O	Laser power auto control output
8	RF	O	RF signal output
9	RFIN	I	RF signal input
10	CSBRT	I	Capacitor for detection connection
11	CEA	I	Capacitor connection for HPF amplifier
12	BDO	O	BDO output ("H" : drop out)
13	LDON	I	LD APC input ("H" : ON, "L" : OFF)
14	GND	—	Ground connection
15	/RFDET	O	NRFDET output ("L" : detection)

Pin No.	Mark	I/O	Function
16	CROSS	O	CROSS output (Track cross signal output)
17	OFTR	O	Off-track output ("L" : ON track, "H" : OFF track)
18	VDET	O	VDET output ("H" : Vibration detected)
19	ENV	O	RF envelope detection
20	EMOFF	I	Not used, connected to power supply
21	TEBPF	I	Oscillation detect signal input
22	TEN	I	Tracking error signal input
23	TEOUT	O	Tracking error signal output
24	FEOUT	O	Focus error signal output
25	FEN	I	Focus error signal input
26	VREF	O	Reference voltage output
27	TBAL	I	Tracking balance signal input
28	FBAL	I	Focus balance signal input

12.7. IC702 (MN662790RSC) Servo Processor / Digital Signal Processor / Digital Filter / D/A Converter

Pin No.	Mark	I/O	Function
1	BCLK	O	Bit Clock Output for Serial Data
2	LRCK	O	L/P Clock Signal Output
3	SRDATA	O	Serial Data Output
4	DVDD1	I	Power Supply Input (for Digital Circuit)
5	DVSS1	I	Ground (for Digital Circuit)
6	TX	O	Digital Audio Interface Signal Output (Latches Data at first Transistion)
7	MCLK	I	Microprocessor Command Clock Signal Input
8	MDATA	I	Microprocessor Command Data Signal Input
9	MLD	I	Microprocessor Command Load Signal Input
10	SENSE	I	Sense Signal Output (OFT, FESL, MAGEND, NAJEND, POSAD, SFG) (Not Used, Open)
11	/FLOCK	O	Focus Servo Feeding Signal Output ("L": Feed)
12	/TLOCK	O	Tracking Servo Feeding Signal Output ("L":Feed)

Pin No.	Mark	I/O	Function
13	BLKCK	O	Sub-Code Block Clodl Signal Output (fBLKCK = 75Hz during Normal Playback)
14	SQCK	I	External Clock Signal Input for Sub-Code Q Resistor)
15	SUBQ	O	Sub-Code Q Code Output
16	DMUTE	I	Muting Input ("H": Mute)
17	STAT	O	Status Signal Output (CRC, CUE, CLVS, TTSTVP, FCLV, SQCK)
18	/RST	I	Reset Signal Input
19	SMCK	O	1/2 - Divided Clock Signal of Crystal Oscillating at MSEL= "H" (fSMCK=8.4672 MHz) 1/4 - Divided Clock Signal of Crystal Oscillating at MSEL= "L" (fSMCK=4.2336 MHz)
20	CSEL	I	Frequency Selection Terminal H= 33.8688 MHz; L= 16.9344 MHz
21	TRV	O	Traverse Forced Feed Output
22	TVD	O	Traverse Drive Output
23	PC	O	Traverse (Spindle) Motor ON Signal Output ("L":ON)

Pin No.	Mark	I/O	Function
24	ECM	O	Spindle Motor Drive Signal Output (Forced Mode Output)
25	ECS	O	Spindle Motor Drive Signal Output. (Servo Error Signal Output)
26	KICK	O	Kick Pulse Output
27	TRD	O	Tracking Drive Output
28	FOD	O	Focus Drive Output
29	VREF	I	D/A (Drive) Output (TVD, ECS, TRD, FOD, FBAL, TBAL) Reference Voltage Input
30	FBAL	O	Focus Error Signal Input (Analog Input)
31	TBAL	O	Tracking Balance Adjustment Output
32	FE	I	Focus Error Signal Input (Analog Input)
33	TE	I	Tracking Error Signal Input (Analog Input)
34	RFENV	I	RF Envelope Signal Input
35	VDET	I	Vibration Detection Signal Input ("H": Detect)
36	OFT	I	Off-Track Signal Input ("H": Off Track)
37	TRCRS	I	Track Cross Signal Input)
38	/RFDET	I	RF Detection Signal Input ("L": Detect)
39	BDO	I	Dropout Signal Input ("H": Dropout)
40	LDON	O	Laser on Signal Output ("H": ON)
41	PLL2	I/O	PLL Loop Filter Characteristic Switching Terminal
42	TOFS/DSL2	O	Tracking Offset Alignment Output/ DSL Balance Output (DA Output)
43	DRF	O	Double Speed Status Signal Output ("H":DS)
44	ARF	I	RF Signal Input
45	IREF	I	Reference Current Input
46	DRF	I	DSL Bias Terminal
47	DSL2	I/O	DSL Loop Filter
48	PLL2	I/O	PLL Loop Filter
49	VCOF	I/O	VCO Loop Filter Terminal
50	AVDD2	I	Power Supply Input (For Analog Circuit)
51	AVSS2	I	GND (For Analog Circuit)
52	EFM	O	EFM Signal Output (Not Used, Open)
53	PCK	O	PLL Extraction Clock Output (Not Used, Open) (fPCK= 4.3218 MHz during Normal Playback)
54	VCOF2	I/O	VCO loop Filter for 33.8688 MHz Conversion Terminal for 16.9344 Mhz Crystal mode, Must use other Circuit)

Pin No.	Mark	I/O	Function
55	SUBC	O	Sub-Code Serial Data Output (Not Used, Open)
56	SBCK	I	Clock Input for Sub-Code Serial Data)
57	VSS	I	GND
58	X1 IN	I	Crystal Oscillating Circuit Input (f= 16.9344 MHz)
59	X2 OUT	O	Crystal Oscillating Circuit Input (f= 16.9344 MHz)
60	VDD	I	Power Supply Input (For Oscillating Circuit)
61	BYTCK	O	Byte Clock Output (Not Used, Open)
62	/CLDCK	O	Sub-Code Frame Clock Signal Output (fCLDCK= 7.35 kHz During Normal Playback)
63	FCLK	O	Crystal Frame Clock Signal Output (fCLDCK= 7.35 kHz)
64	IPFLAG	O	Interpolation Flag Output ("H": Interpolation) (Not Used, Open)
65	FLAG	O	Flag Output (Not Used, Open)
66	CLVS	O	Spindle Servo Phase Synchronizing Signal Output ("H": CLV, "L": Rough Servo) (Not used, Open)
67	CRC	O	Sub-Code CRC Checked Output ("H": OK, "L" NG) (Not Used, Open)
68	DEMPH	O	De-Emphasis DN Signal Output ("H":ON)
69	RESY	O	Frame Re-synchronizing Signal Output
70	IOSEL	I	Mode Switching Terminal
71	/TEST	I	Test Input
72	AVDD1	I	Power Supply Input (For Analog Circuit)
73	OUTL	O	Left Channel Audio Signal Output
74	AVSS1	I	GND
75	OUTR	O	Right Signal Audio Signal Output
76	RSEL	I	RF Signal Polarity Assignment Input (at "H" level, RSEL= "H", at "L" SEL= "L")
77	IOVDD	I	5V Supply
78	PSEL	I	Test terminal (Connected to GND)
79	MSEL	I	SMCK Oscillating Frequency Designation Input ("L": 4.2336 MHz, "H" 8.4672MHz)
80	SSEL	I	SUBQ Output Mode Select ("H": Q-Code Buffer Mode)

12.8. IC703 (BA5948FPE2) Focus Coil / Tracking Coil / Traverse Motor / Spindle Motor Driver

Pin No.	Mark	I/O	Function
1	IN2	I	Motor Driver 92) Input
2	PC2	I	Turntable Motor Drive Signal ("L":ON)
3	IN1	I	Motor Driver (1) Input
4	PC1	—	Traverse Motor Drive Signal ("L":ON)
5	NC	—	No connection

Pin No.	Mark	I/O	Function
6	NC	—	No connection
7	NC	—	No connection
8	NC	—	No connection
9	PGND1	—	Ground Conenction (1) for Driver
10	PVCC1	I	Power Supply (1) for Driver
11	D1-	O	Motor Driver (1) reverse - action output

Pin No.	Mark	I/O	Function
12	D1+	O	Motor Driver (1) forward - action output
13	D2-	O	Motor Driver (2) reverse - action output
14	D2+	O	Motor Driver (1) forward - action output
15	D3-	O	Motor Driver (3) reverse - action output
16	D3-	O	Motor Driver (3) forward - action output
17	D4-	O	Motor Driver (4) reverse - action output

Pin No.	Mark	I/O	Function
18	D4+	O	Motor Driver (4) forward - action output
19	PVCC2	I	Power Supply (2) for Driver
20	PGND2	—	Ground Connection(2) for Driver
21	NC	NC	No Connection
22	NC	NC	No Connection
23	NC	NC	No Connection
24	NC	NC	No Connection
25	VCC	I	Power Supply Terminal
26	VREF	I	Reference Voltage Input
27	IN4	I	Motor Driver (4) Input
28	IN3	I	Motor Driver (3) Input

12.9. IC801 (MN101C12GRB1) System Microprocessor

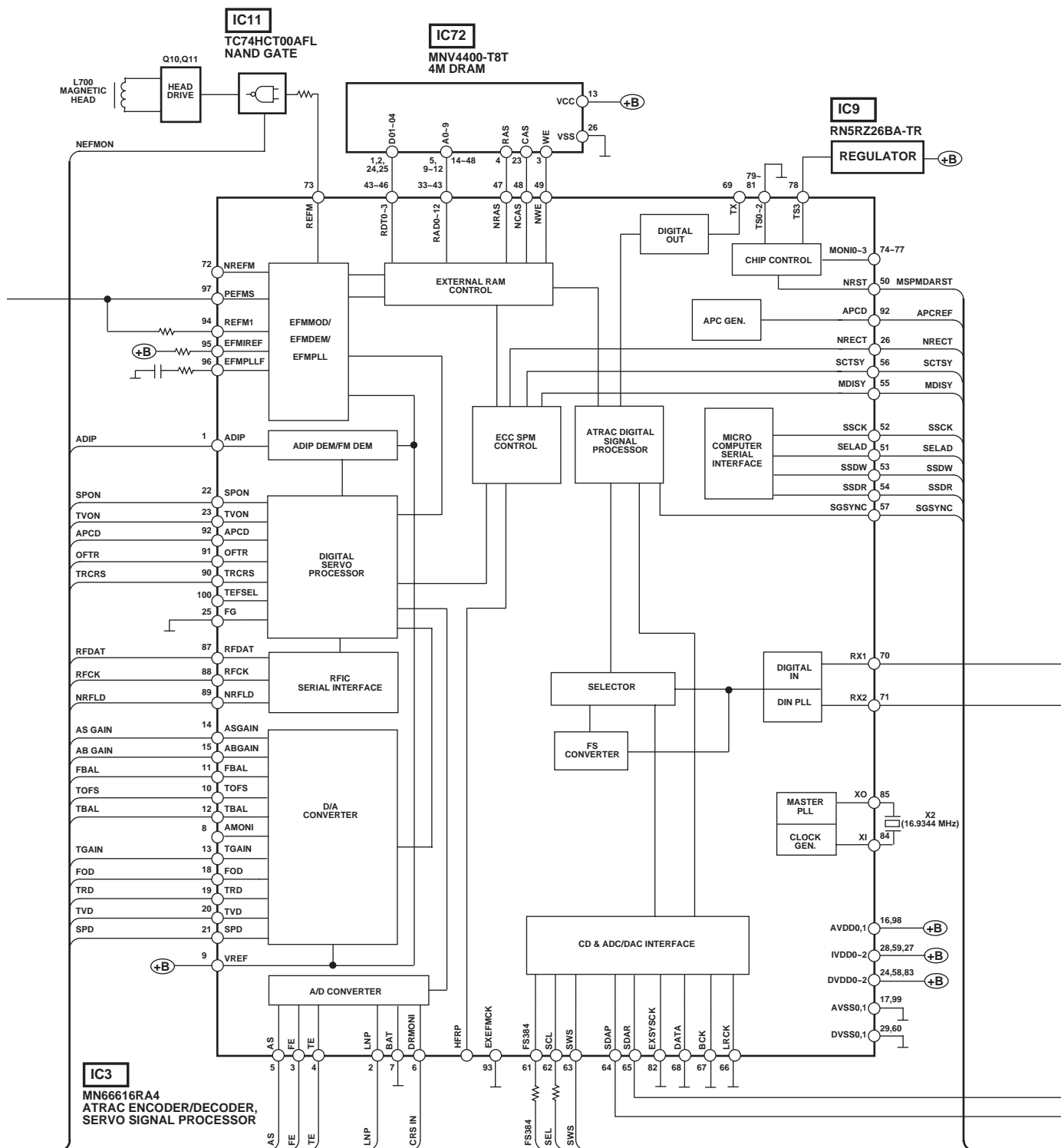
Pin No.	Mark	I/O	Function
1	Vref-	—	A/D Convertor Reference GND
2	ADINO	AD I	KEY 0 Input
3	ADIN1	AD I	KEY 1 Input
4	ADIN2	AD I	KEY 2 Input
5	ADIN3	AD I	Mech Condition Input 1 (HALF/RECI_F/RECI_R/MODE)
6	ADIN4	AD I	Mech Condition Input 2 (PHOTO/TPS)
7	ADIN5	AD I	Power Detect
8	ADIN6	AD I	Treble Control Volume Input
9	ADIN7	AD I	Bass Control Volume Input
10	VRef+	—	A/D Converter Reference Voltage
11	VDD	—	Power Input Pin
12	OSC2	O	Main Oscillator Output
13	OSC1	I	Main Oscillator Input
14	VSS	—	GND
15	XI	I	Suboscillator Input
16	XO	O	Suboscillator Output
17	MMOD	I	Memory Mode Selection
18	MBP1	I/O	Micom Beatproof Cont 1 (active H)
19	MBP2	I/O	Micom Beatproof Cont 2 (active H)
20	CRTIMER	I/O	CR Timer
21	FL DATA	I/O	FL Driver Data Output
22	(N.C)	I/O	(Open)
23	/FLCLK	I/O	FL Driver Clock Selection
24	/FLCS	I/O	FL Driver Selection
25	/FLRST	I/O	FL Driver Reset Output
26	RM IN	I	Remote Input
27	/BLKCK	I	CD Subcode Block Clock Input
28	SYNC/HALT	I	Power Failure Detection Pulse Input
29	MD_CS	I	MD CS Input
30	(N.C)	I	(Open)
31	JOG B	I	Jog Input B (Volume)
32	JOG A	I	Jog Input A (Volume)
33	MICON RST	I	Micom Reset (L:Reset)
34	CD_OPSW	I/O	CD Tray Open Detect SW (H: OPEN; L: CLOSE)
35	CrO2PB	I/O	CrOz TAPE Playback Sound Quality Revised Control (active H)
36	SEL1	I/O	Function Change 1
37	SEL2	I/O	Function Change 1
38	(N.C)	I/O	(Open)
39	DIGITAL	I/O	Opt In Mute Control Out (L: Digital in)
40	CD_H	I/O	"H": CD Function; "L": CD Non-Function)

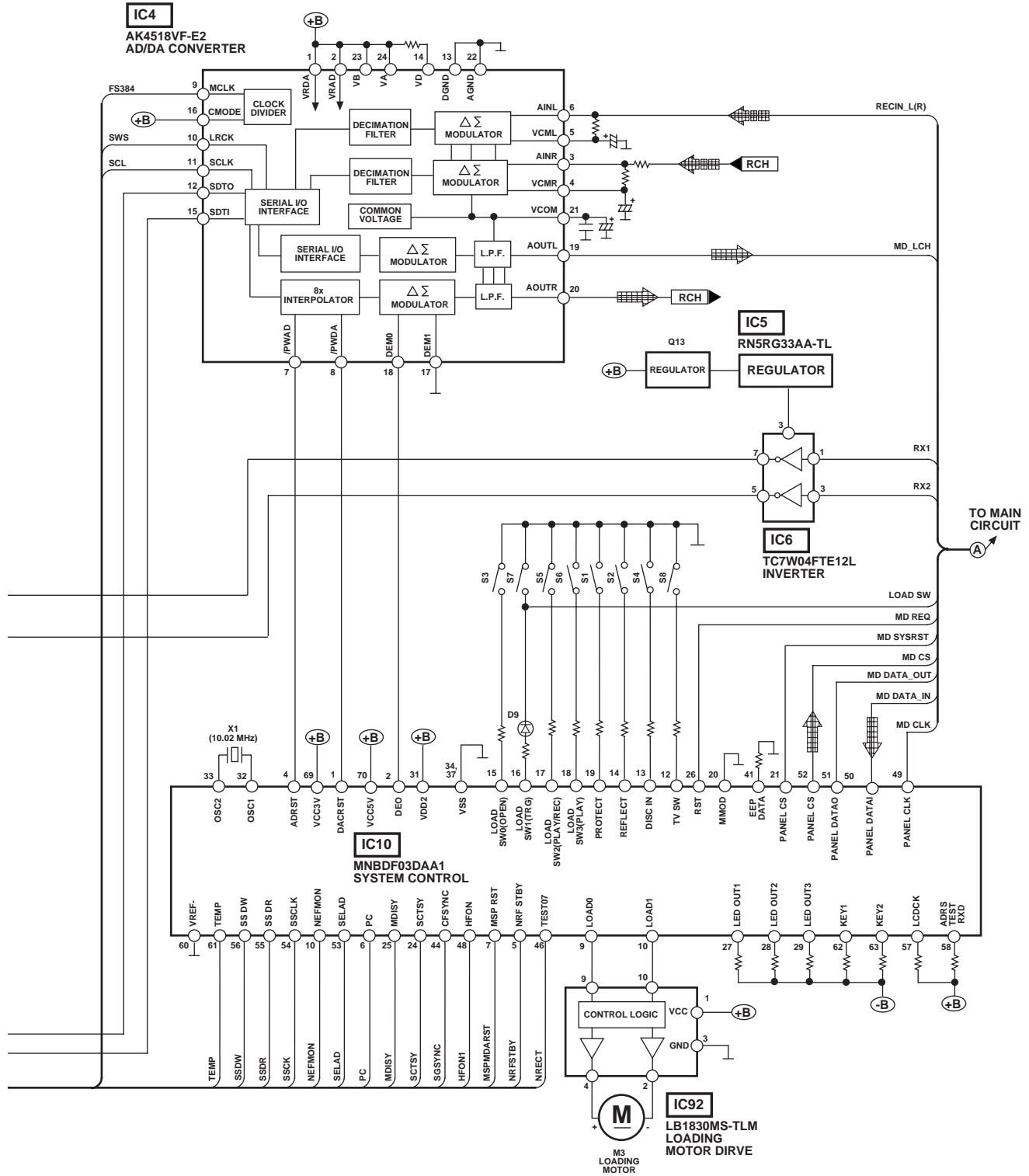
Pin No.	Mark	I/O	Function
41	MDX2REC	I/O	CD Highspeed Recording Corresponding InputH: Highspeed Correspondence)
42	AUX2_DATAOUT	I/O	P-MD LinkData Out
43	/SUBQAUXDATA	I/O	CD Subcode Data In P-MD Link use Data In
44	SQCK	I/O	CD Subcode Read Clock Output
45	MD_DATAIN	I/O	MD Data Output (Input of MD unit)
46	MD_DATAOUT	I/O	MD Data Output (Input of MD Unit)
47	MD_CLK	I/O	MD Clock Output
48	MD_REQ	I/O	MD Request Signal Out
49	MD_SYS RST	I/O	MD Reset Output(L:Reset)
50	LOADSW	I/O	MD Loading SW Input(H: SW Off)
51	CrO2	I/O	CrOz Detect SW Input (H: CrOz)
52	RECH	I/O	Deck REC Control Output(active H)
53	BP	I/O	AM REC BeatProof Output
54	DMT	I/O	Deck Mute Output(L: Mute On)
55	ECLK	I/O	EEPROM Clock Output
56	ECS	I/O	EEPROM CS Output
57	EDATA	I/O	EEPROM Data In/Out
58	MUTE A	I/O	Audio Mute Output(L: Mute On)
59	PWRCONT	I/O	Power Control Output
60	/CD_L	I/O	Non-CD Function L
61	/STATUS	I/O	CD Status Input
62	CD RESET	I/O	CD Reset Output
63	/RESTSW	I/O	CD Traverse Limit SW
64	MCLK	I/O	CD LSI Command Clock
65	MDATA	I/O	CD LSI Command Data
66	MLD	I/O	CD LSI Command Load
67	(N.C)	I/O	(Open)
68	GLIDE_CL	I/O	Front Panel Close Control (active H)
69	GLIDE_OP	I/O	Front Panel Open Control (active H)
70	CD_CL	I/O	CD Tray Close Low Speed (active L)
71	CD_OP	I/O	CD Tray Close Low Speed (active H)
72	(N.C)	I/O	(Open)
73	ACCNT	I/O	Main Transformer Control Output (active H)
74	SD	I/O	Tuner Signal Detect
75	PLL DO	I/O	PLL Control Data Output
76	PLL DI	I/O	PLL Count Data Output
77	PLL CE	I/O	PLL Chip Enable Output

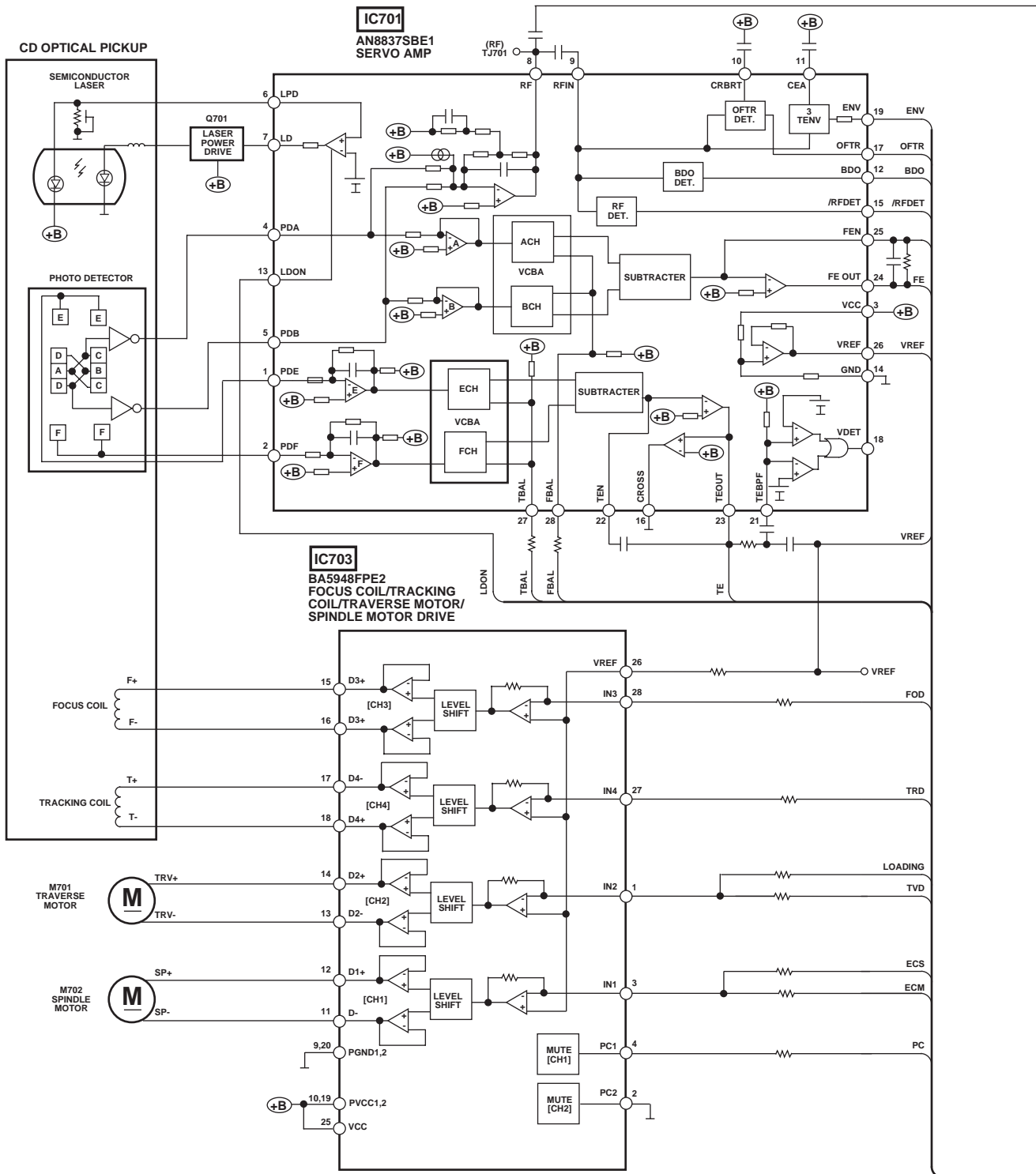
Pin No.	Mark	I/O	Function
78	PLL CLK	I/O	PLL Clock Output
79	(N.C)	I/O	(Open)
80	(N.C)	I/O	(Open)
81	TMRLED	I/O	Timer LED Control Out (Timer Setting: L)
82	ASP CLOCK OUTPUT	I/O	ASP Clock Output
83	AGDATA	I/O	ASP Data Output
84	AGLATCH	I/O	ASP Latch Output
85	(N.C)	I/O	(Open)
86	(N.C)	I/O	(Open)
87	(N.C)	I/O	(Open)
88	(N.C)	I/O	(Open)
89	(N.C)	I/O	(Open)
90	LED 1	I/O	LED Control (active L)

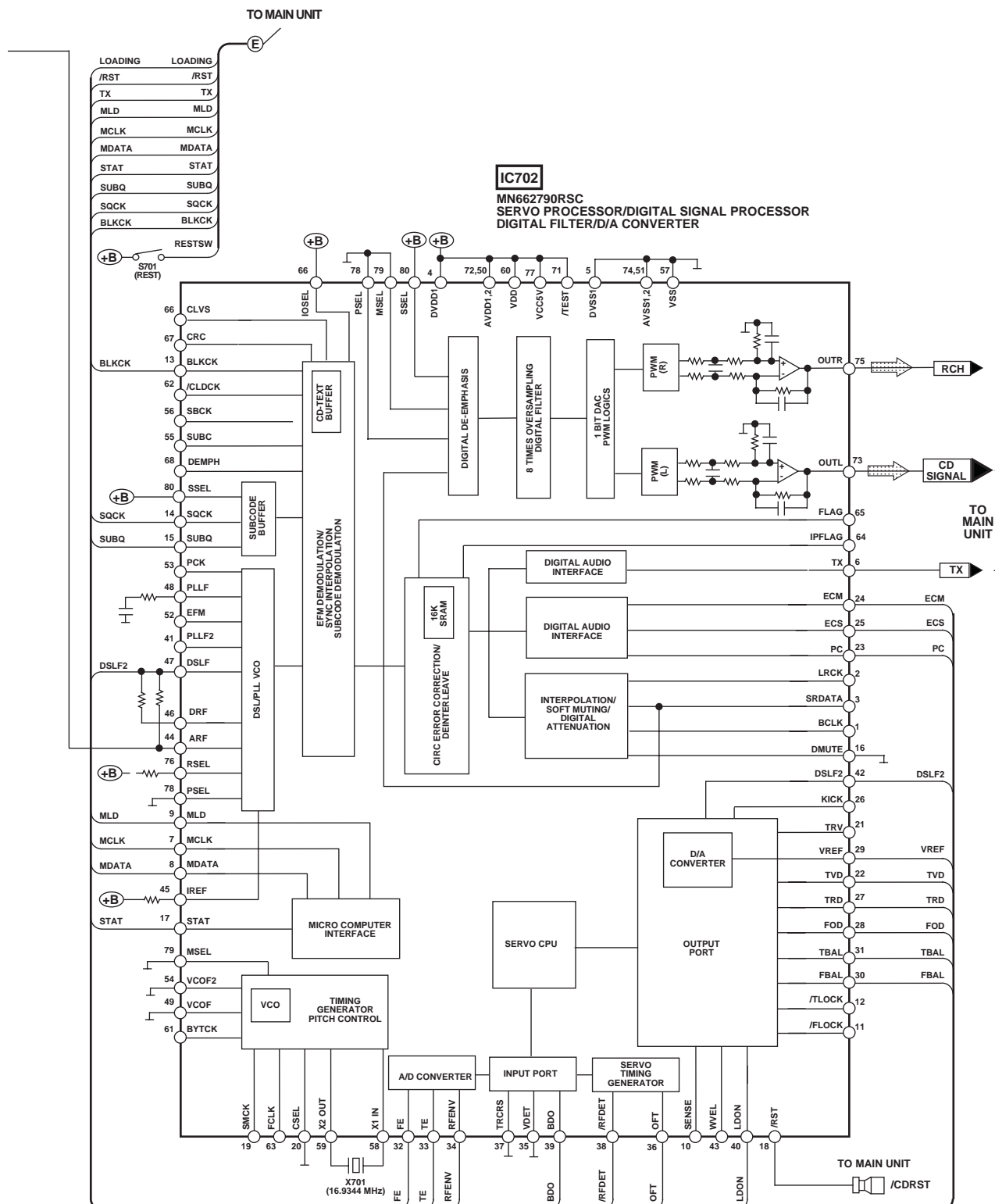
Pin No.	Mark	I/O	Function
91	DES1	I/O	Destination Setup 1
92	DES2	I/O	Destination Setup 2
93	OPEN_H	I/O	CD Tray Open Control (active H)
94	CLOSE_L	I/O	CD Tray Close Control (active L)
95	GND	—	D/A Converter Reference GND
96	(N.C)	I/O	(Open)
97	(N.C)	I/O	(Open)
98	(N.C)	I/O	(Open)
99	(N.C)	I/O	(Open)
100	VRef+	—	D/A Converter Reference Voltage

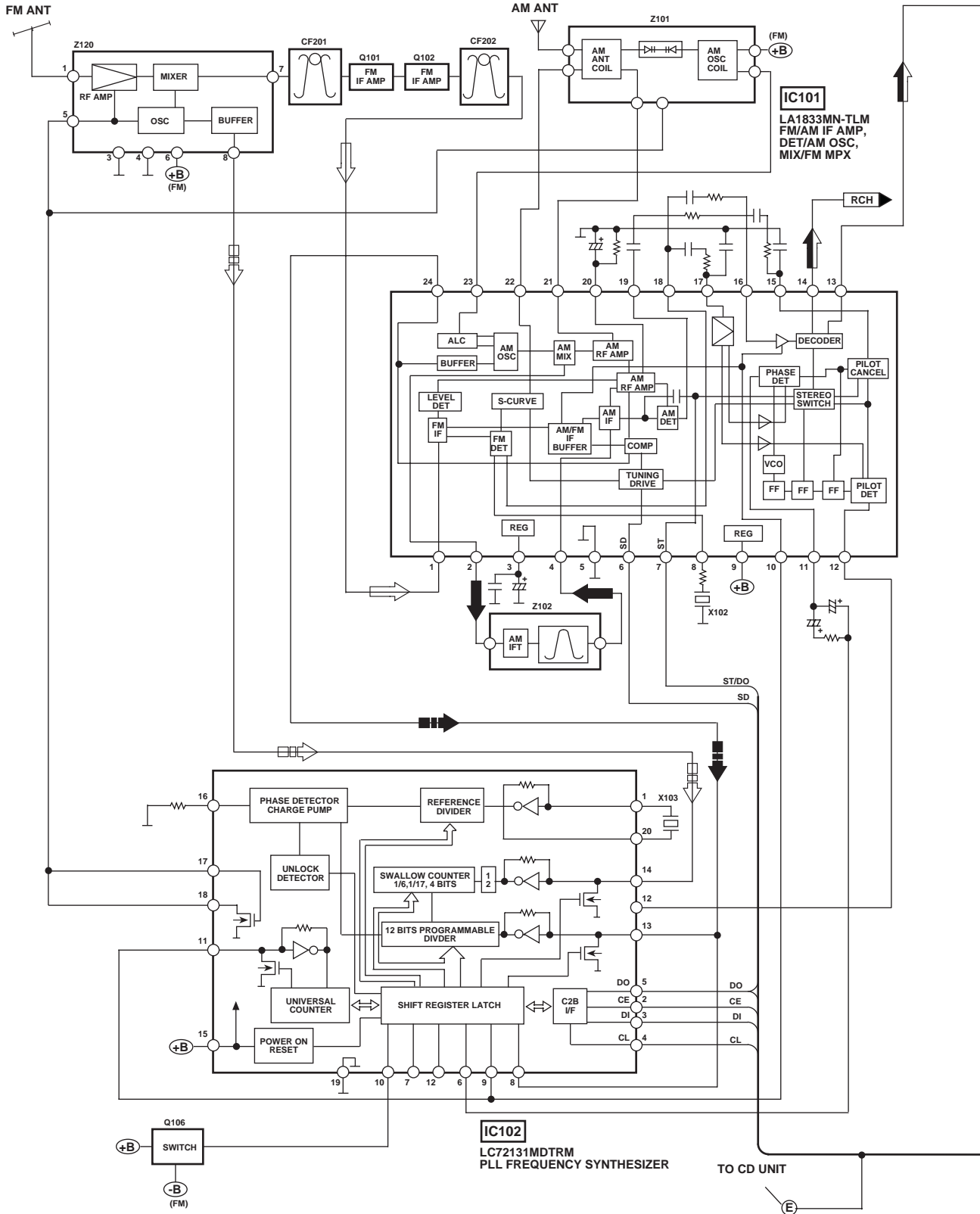


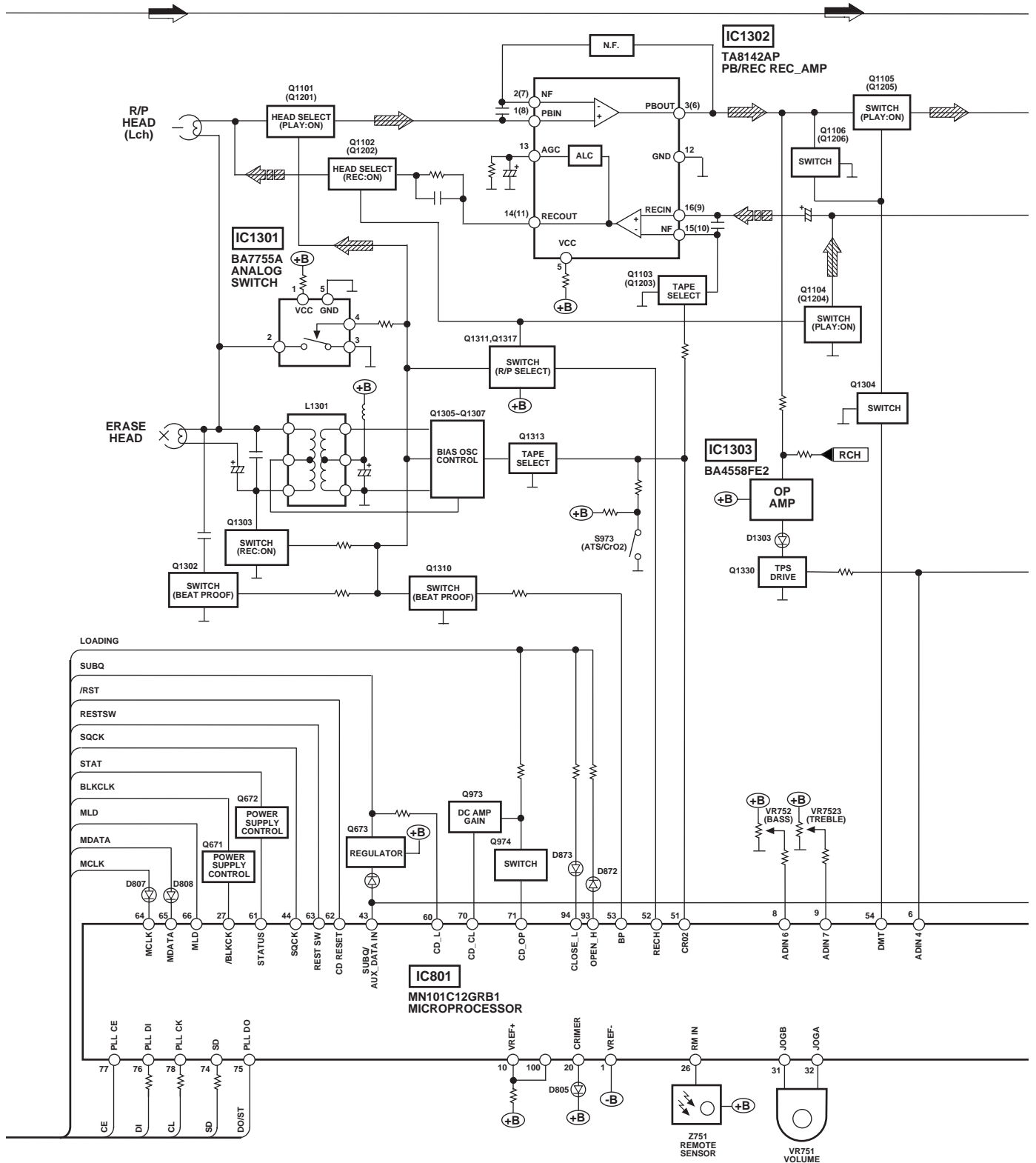


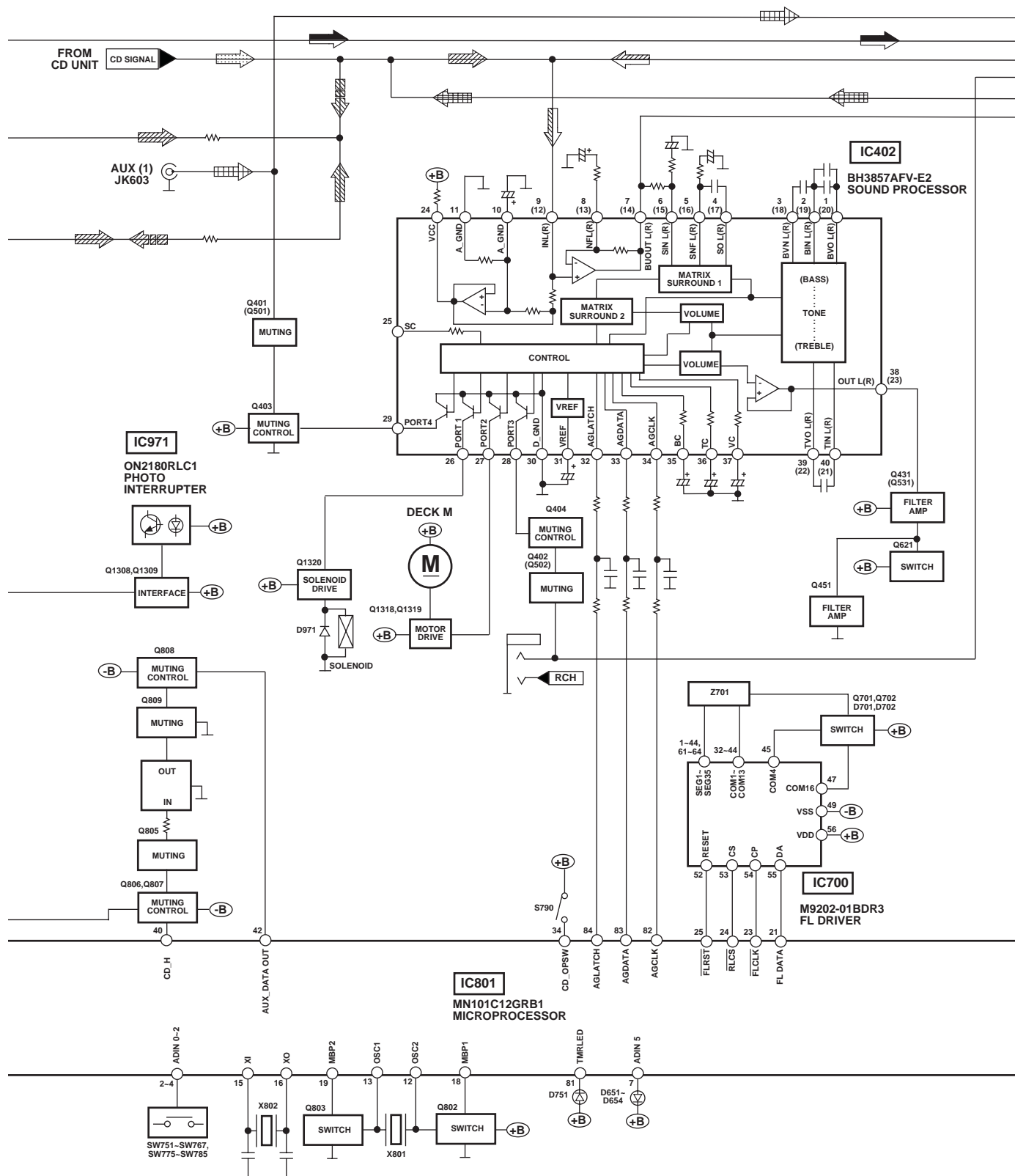


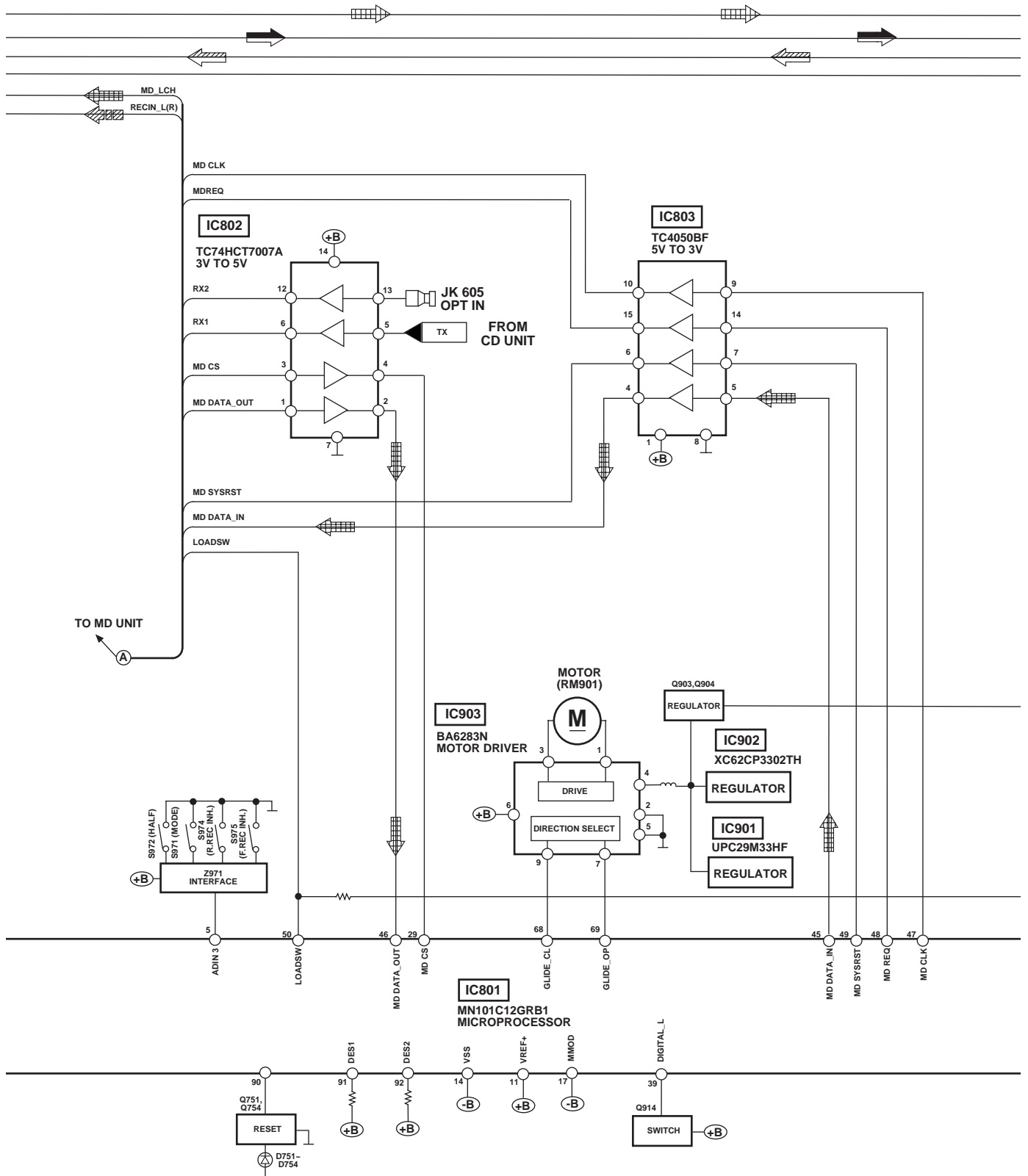


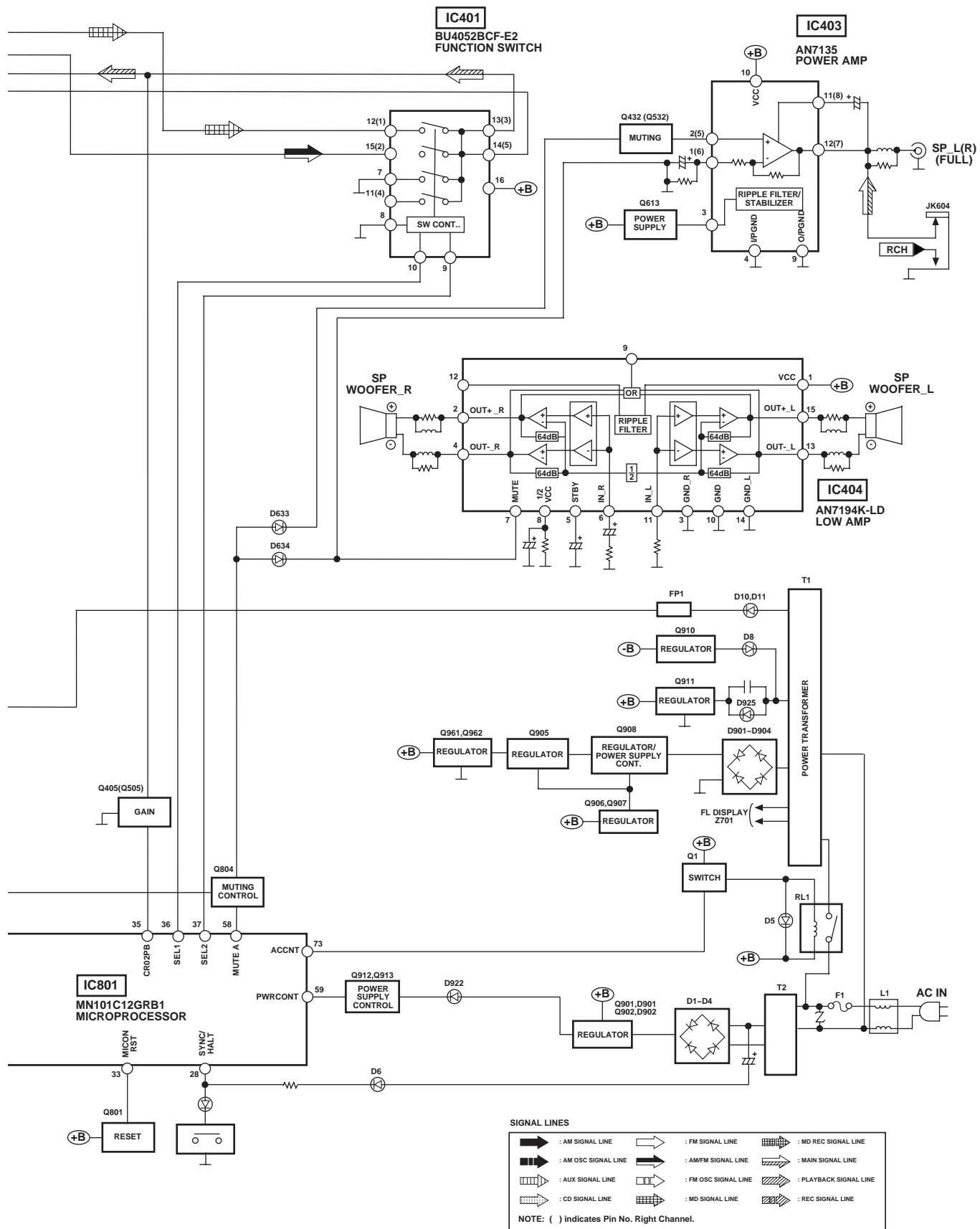
















14 Schematic Diagram











(All schematic diagrams may be modified at any time with the development of new technology)

Note :

S1	PROTECT detect switch
S2	REFLECT detect switch
S3	LOAD OPEN detect switch
S4	DISC IN detect switch
S5	LOAD PLAY/REC detect switch
S6	LOAD PLAY detect switch
S7	LOAD TRG detect switch
S8	Traverse detect switch
S701	Reset switch
S971	Mode detect switch
S972	Tape detect switch
S973	CrO2 detect switch
S974	Record detect switch
S975	Record detect switch
SW751	Tape open switch
SW752	Memory/Enter switch
SW753	MD edit switch
SW754	CANCEL switch
SW755	MD REC MODE select switch
SW756	MD & TAPE REC select switch
SW757	TAPE REC/PAUSE switch
SW758	MD REC/PAUSE switch
SW759	CD EDIT switch
SW760	AUX select switch
SW761	P-MD select switch
SW763	GLIDE OPEN/CLOSE switch
SW764	CLOCK/TIMER switch
SW765	PLAY/REC TIMER switch
SW766	TUNE/TIME ADJ UP/+ switch
SW767	TUNE/TIME ADJ DOWN/- switch
SW775	POWER switch
SW776	ECO MODE select switch
SW777	TUNER/BAND select switch
SW778	TAPE select, forward/reverse play switch
SW779	MD select, play/pause switch
SW780	CD select, play/pause switch
SW781	Reverse/Skip switch
SW782	Forward/Skip switch
SW783	Stop switch
SW784	CD OPEN/CLOSE switch
SW785	MD EJECT switch
SW800	System reset switch
VR1	Laser power adjust VR
VR751	Volume control VR
VR752	Treble control
VR753	Bass control VR

Signal line


	: +B line
	: -B line
	: FM/AM signal line
	: Main signal line

	: Playback signal line
	: Record signal line
	: FM signal line
	: AM signal line
	: AM OSC signal line
	: FM OSC signal line
	: AUX signal line
	: CD signal line
	: MD signal line
	: MD record signal line

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark	: Playback
<< >>	: Rec
(())	: CD
< >	: FM
()	: AM
(for MD Servo Circuit)	
()	: MD play [1kHz, L+R, 0dB]
< >	: MD rec. [1kHz, L+R, 0dB]
{ }	: MD

• Importance safety notice :

Components identified by  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

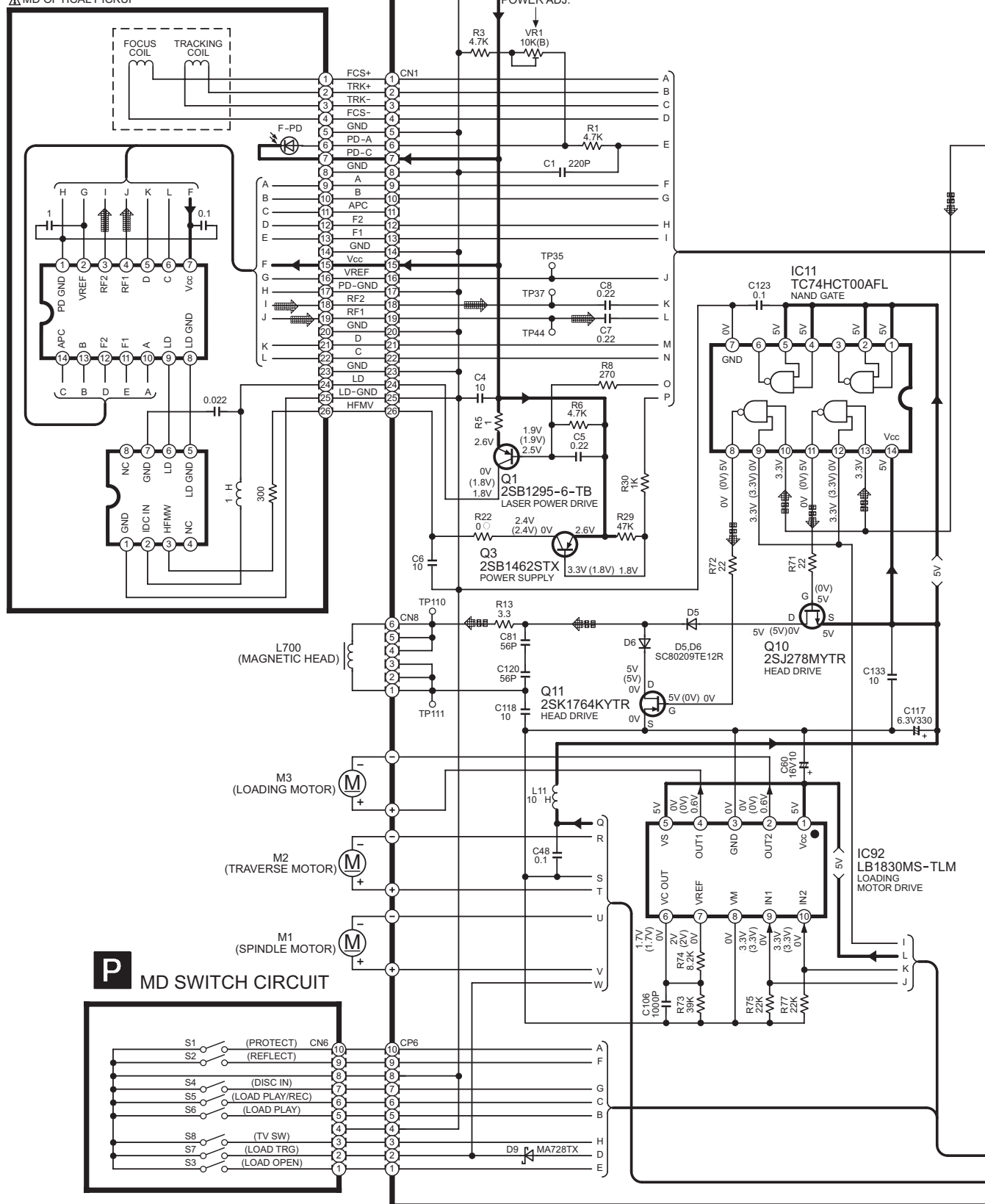
IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

Note:

▲ MD OPTICAL PICKUP



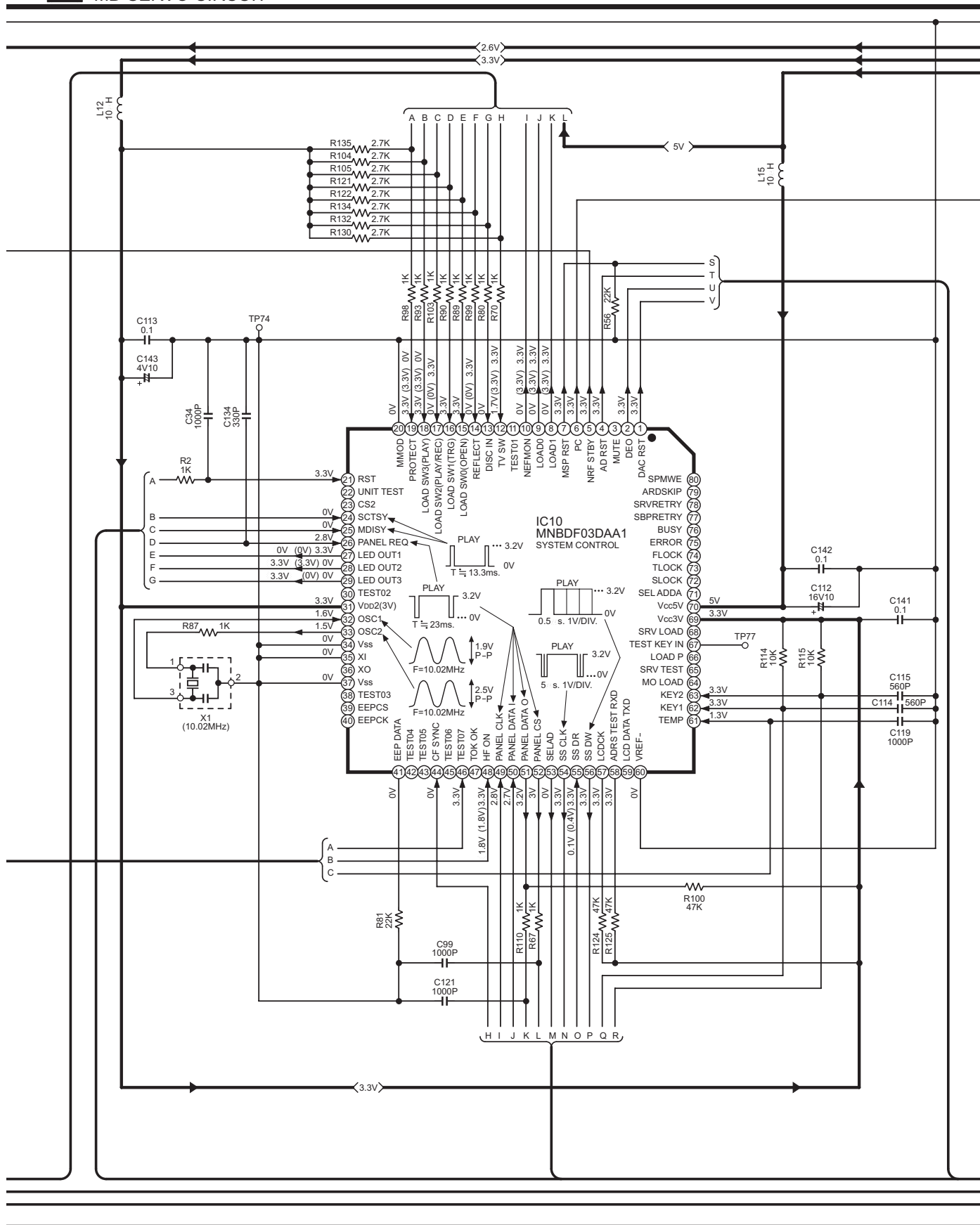


SCHEMATIC DIAGRAM-3

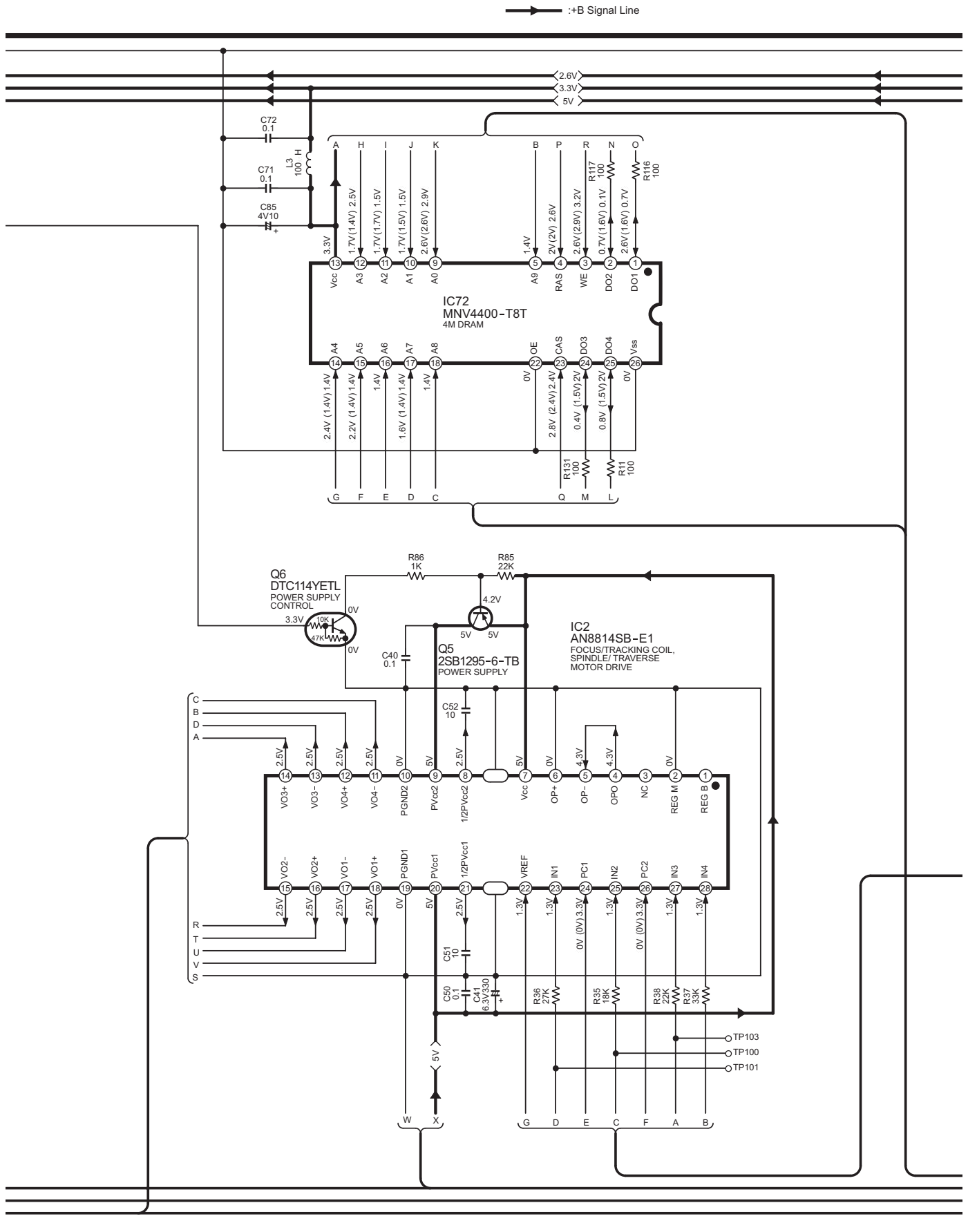
A

MD SERVO CIRCUIT

→ :+B Signal Line



SCHEMATIC DIAGRAM-4



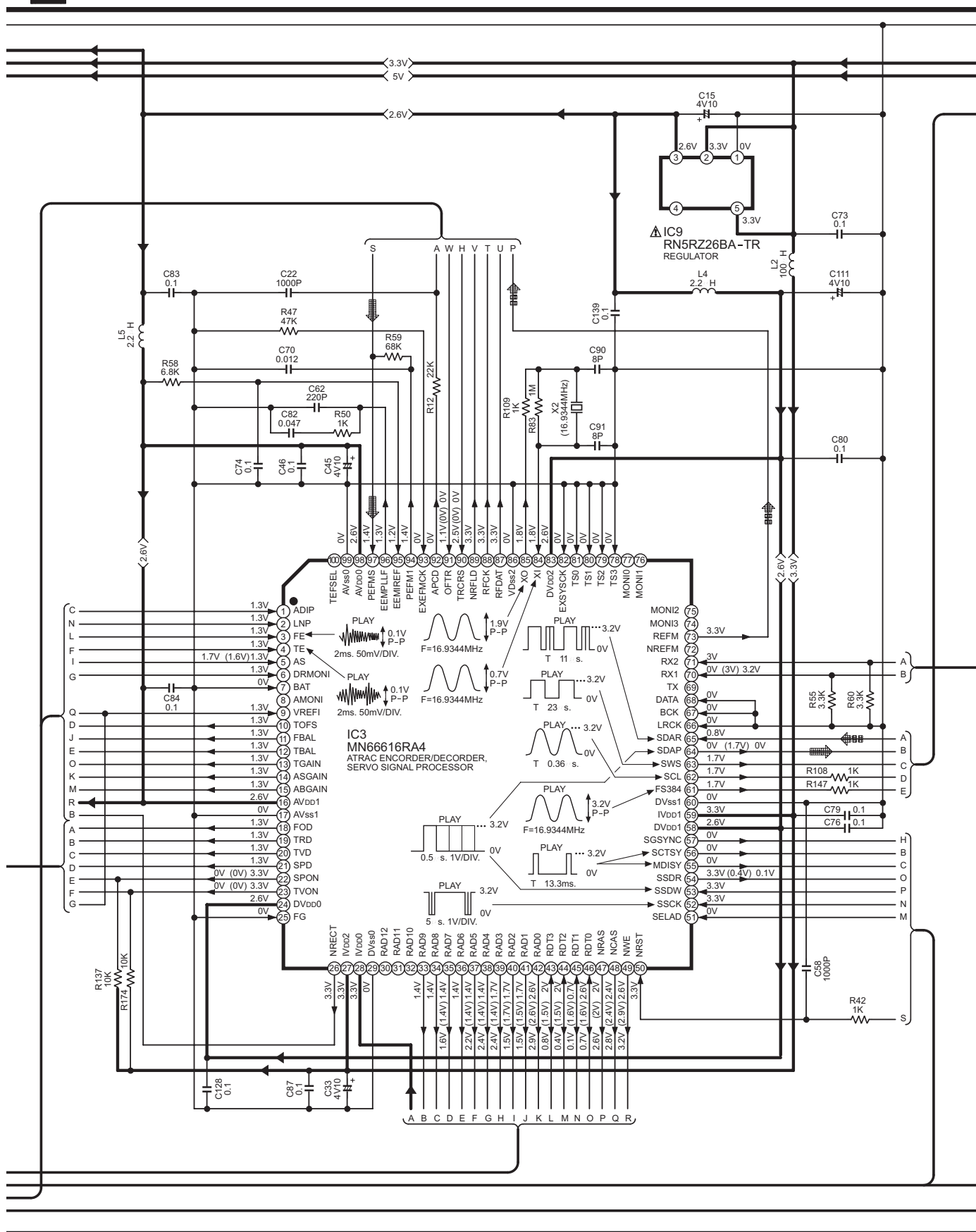
SCHEMATIC DIAGRAM-5

A MD SERVO CIRCUIT

→ :+B Signal Line

⇒ :MD Signal Line

⇒⇒ :MD Recording Signal Line

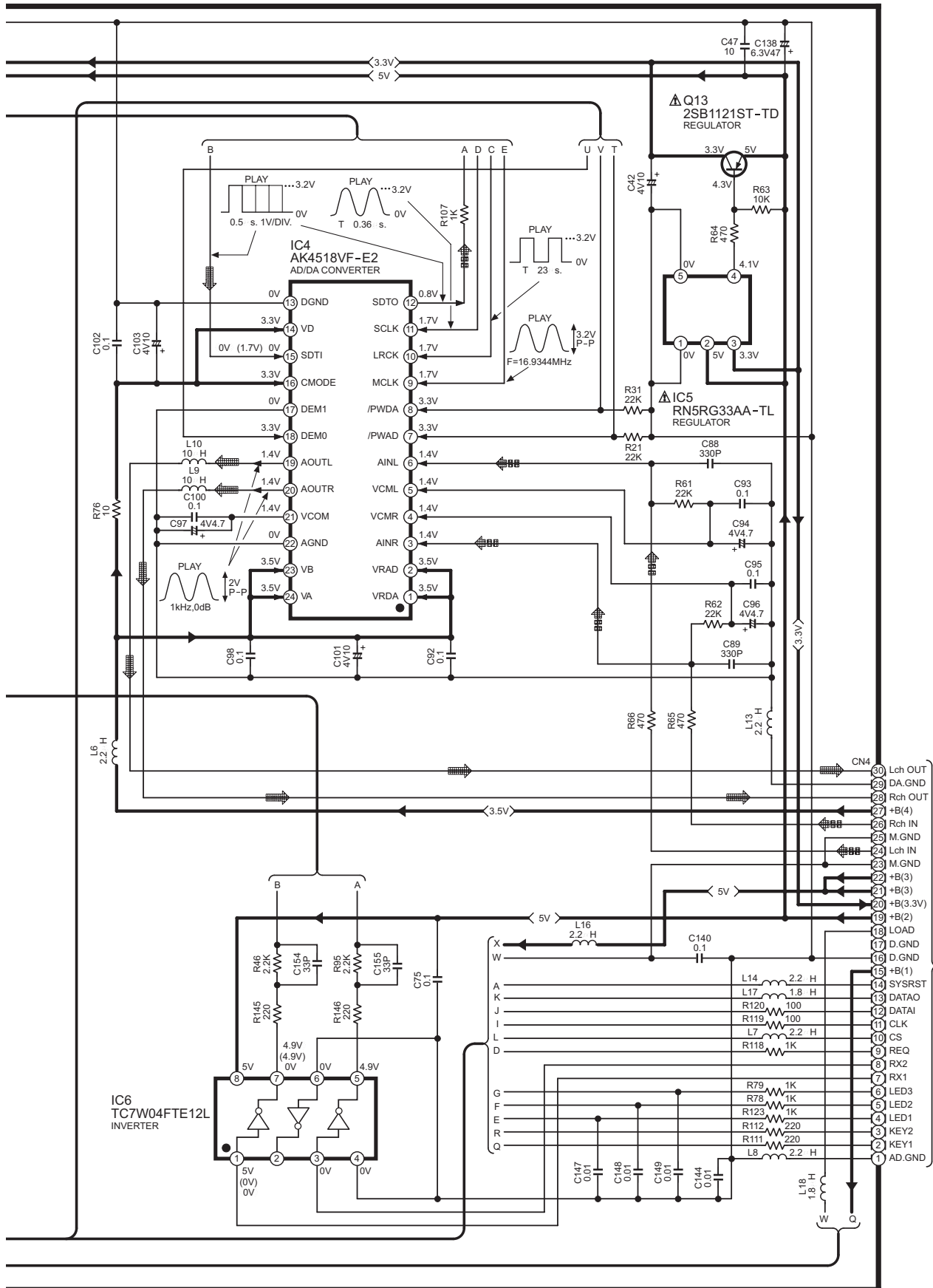


SCHEMATIC DIAGRAM-6

→ :+B Signal Line

▤ :MD Signal Line

▤▤ : MD Recording Signal Line



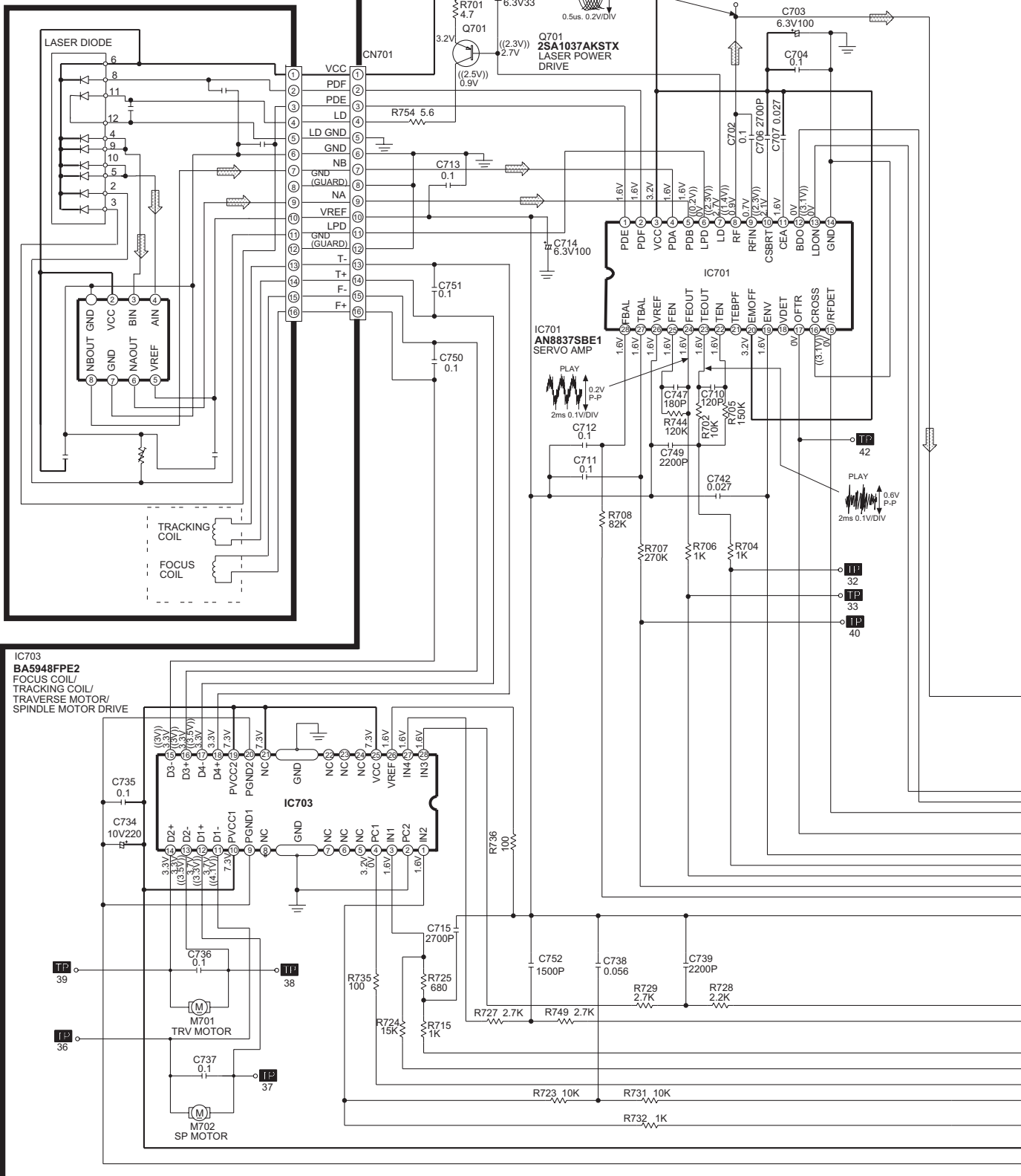
C
TO MAIN
CIRCUIT
(CS605) ON
SCHEMATIC
DIAGRAM-12

14.2. (B) CD Servo Circuit

SCHEMATIC DIAGRAM-7

B CD SERVO CIRCUIT

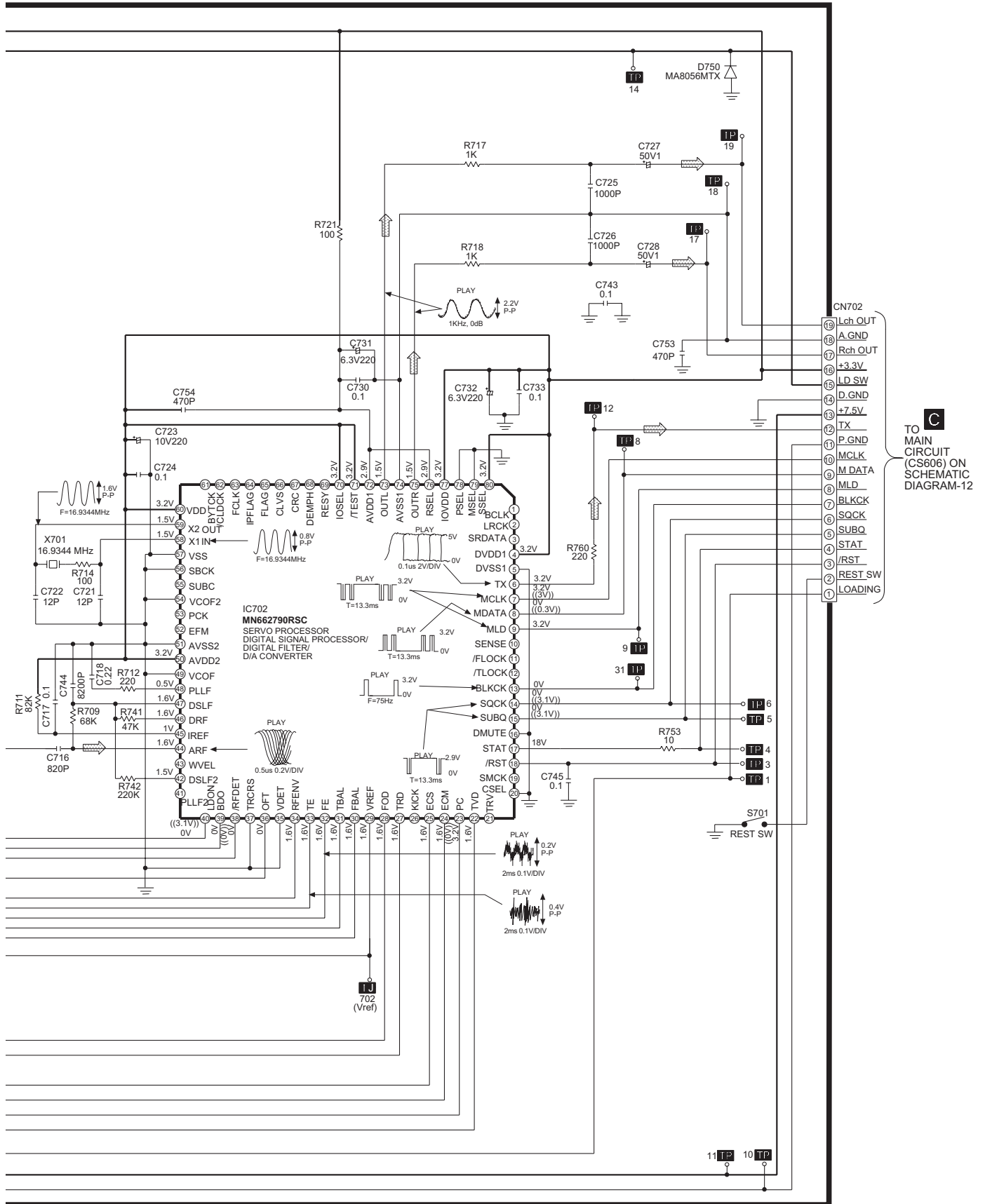
OPTICAL PICKUP CIRCUIT



SCHEMATIC DIAGRAM-8

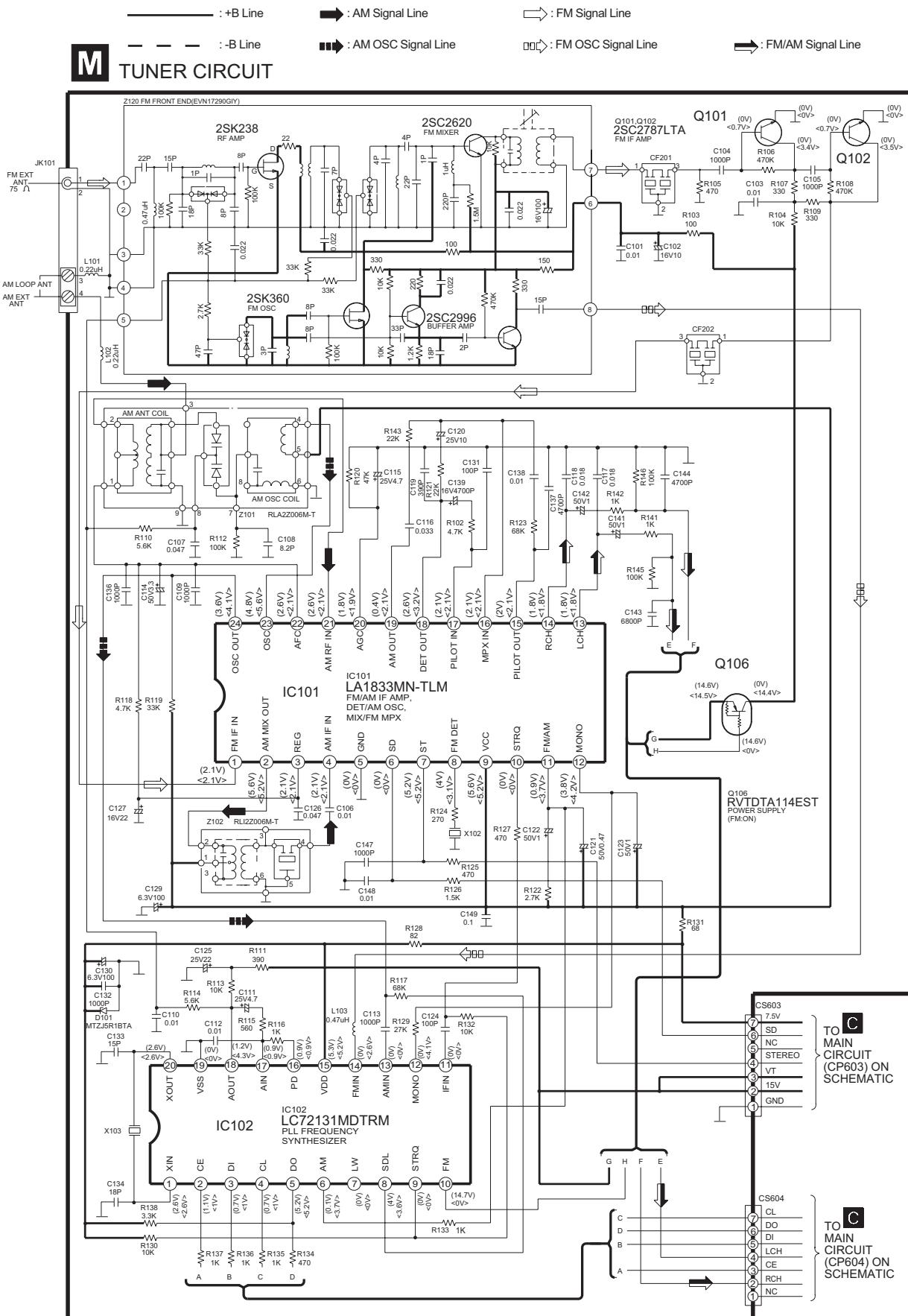
: + B Line

: CD Signal Line



14.3. (M)Tuner Circuit

SCHEMATIC DIAGRAM-9



L DECK CIRCUIT



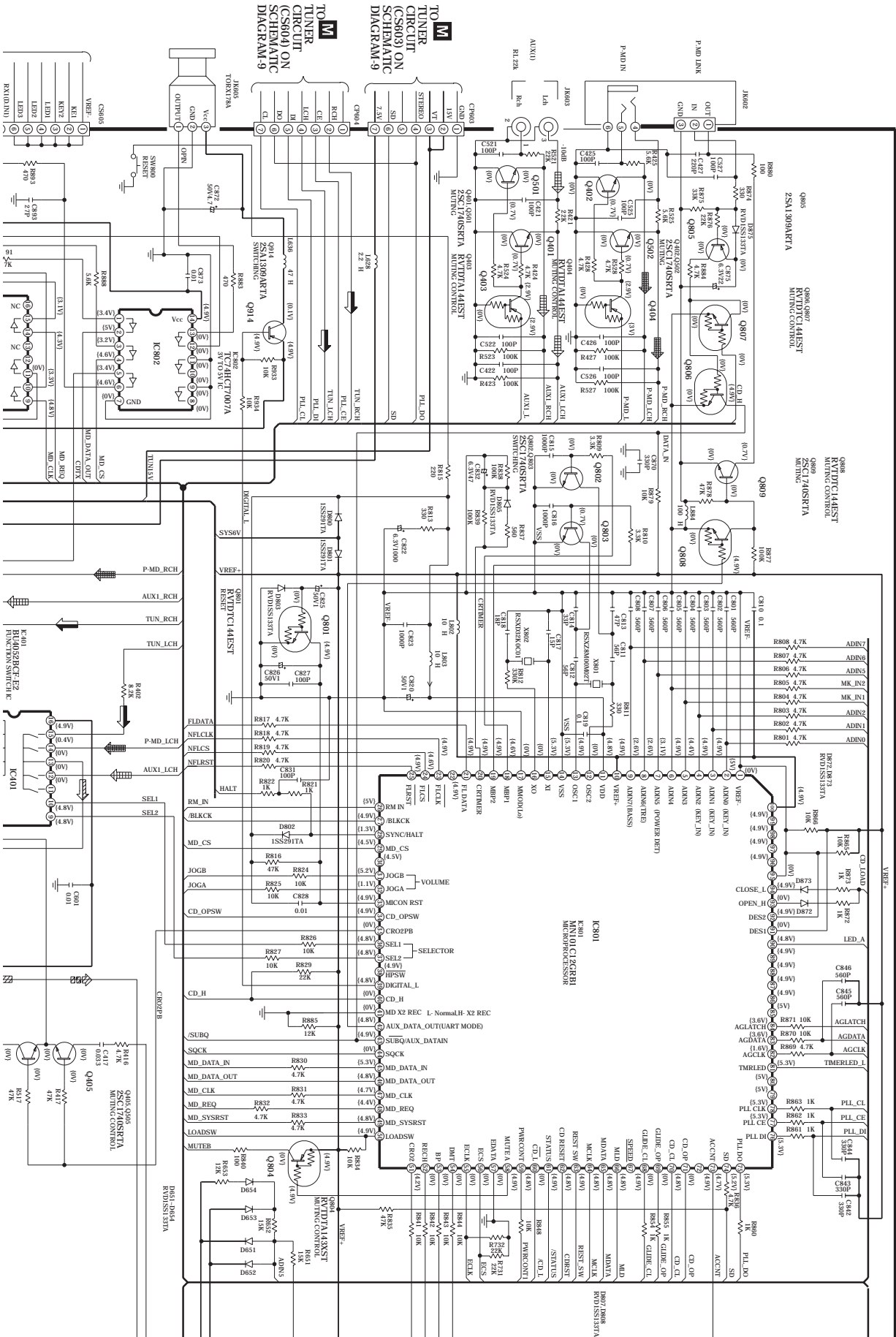


14.5. (c) Main Circuit

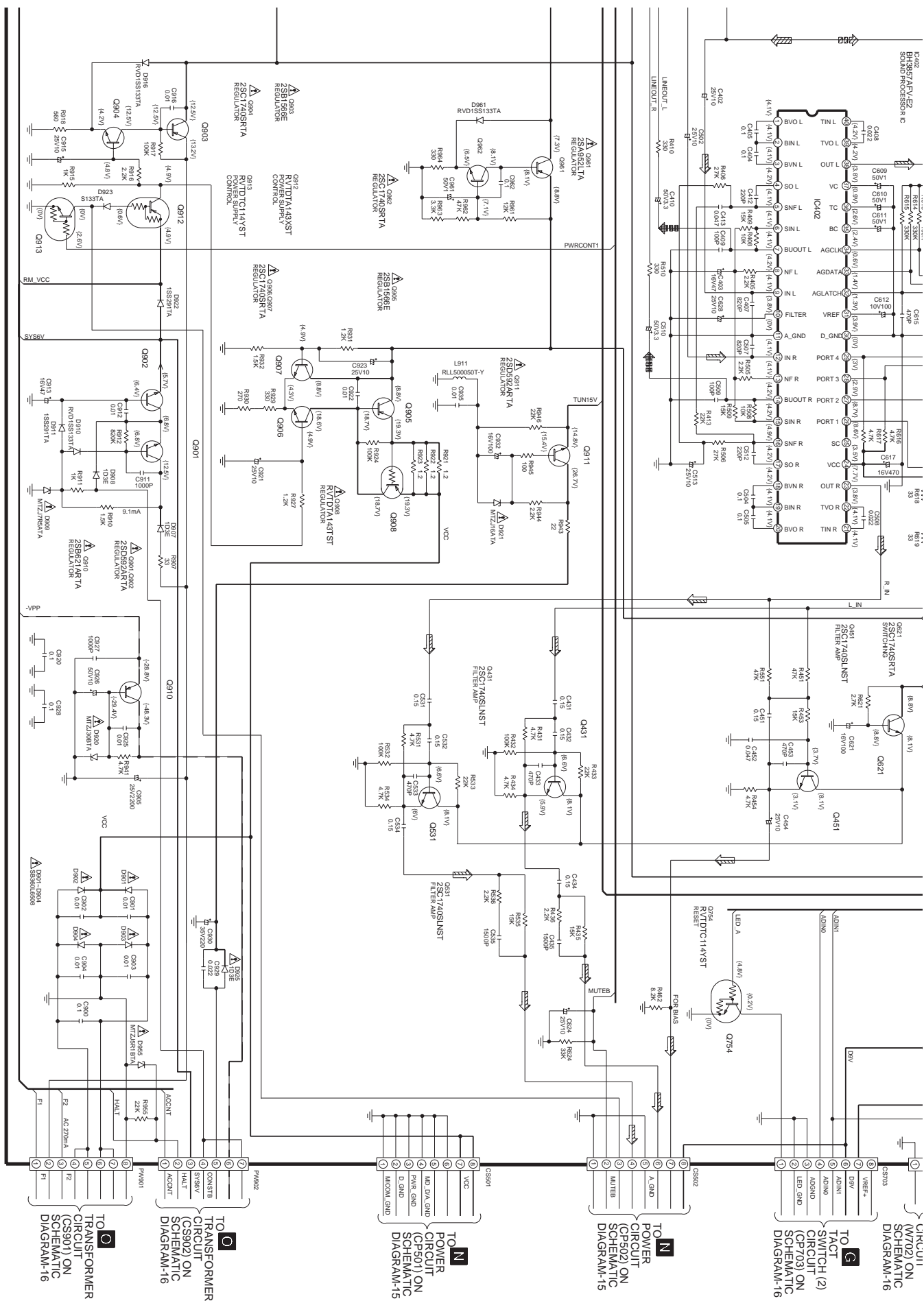
SCHEMATIC DIAGRAM-12

MAIN CIRCUIT

— : B Signal Line
 — — : B Signal Line
 ⇨ : Main Signal Line
 ⇨ : AUX Signal Line
 ⇨ : Playback Signal
 ⇨ : Record Signal Line
 ⇨ : MD Recording Signal
 ⇨ : FM/AM Signal Line
 ⇨ : CD Signal Line







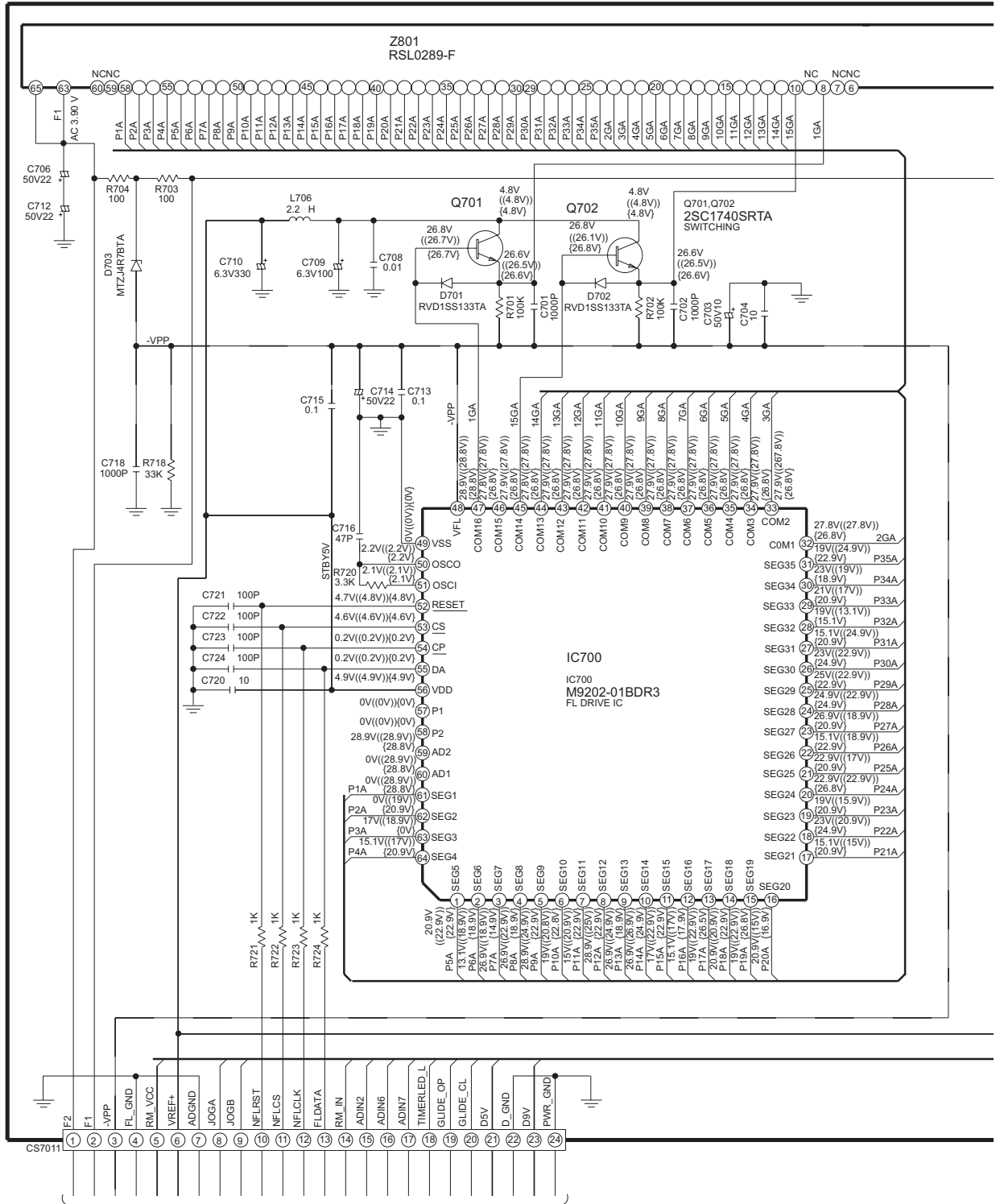
14.6. (D) FL Circuit (E) Control Circuit (I) Motor Circuit

SCHEMATIC DIAGRAM-13

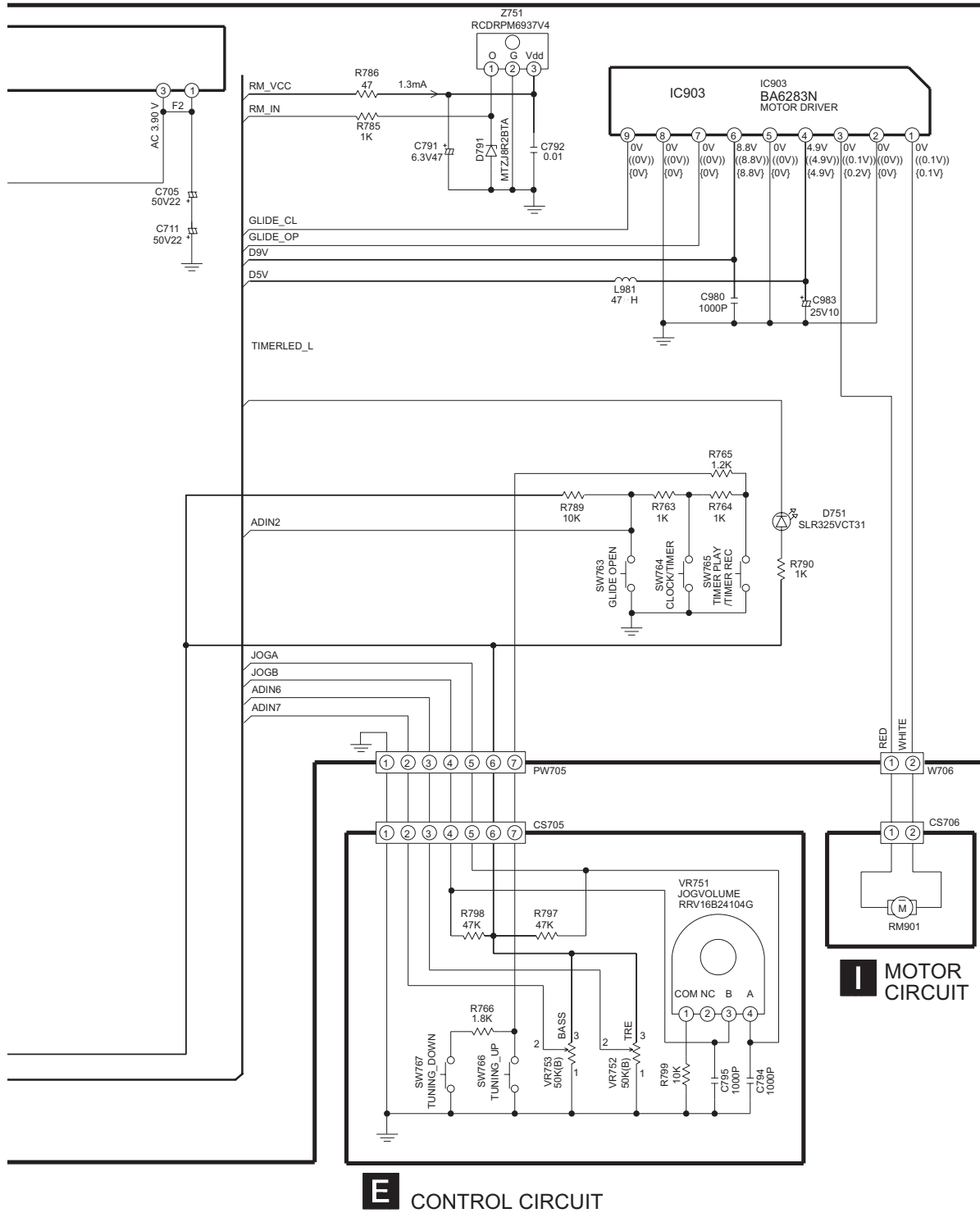
— : +B Signal Line

- - - : -B Signal Line

D FL CIRCUIT

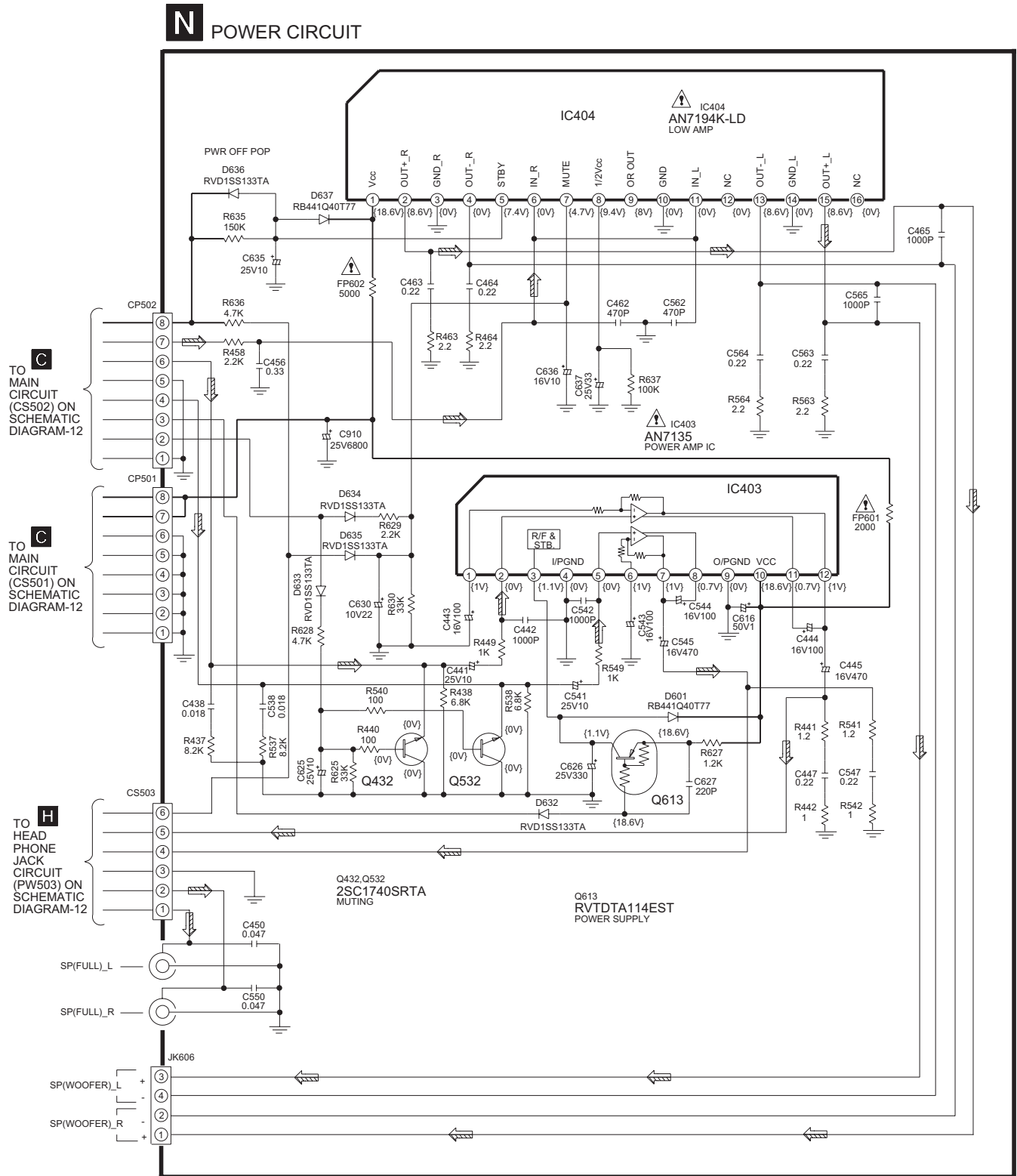


TO
MAIN
CIRCUIT
(CS701) ON
SCHEMATIC
DIAGRAM-12



14.7. (N) Power Circuit

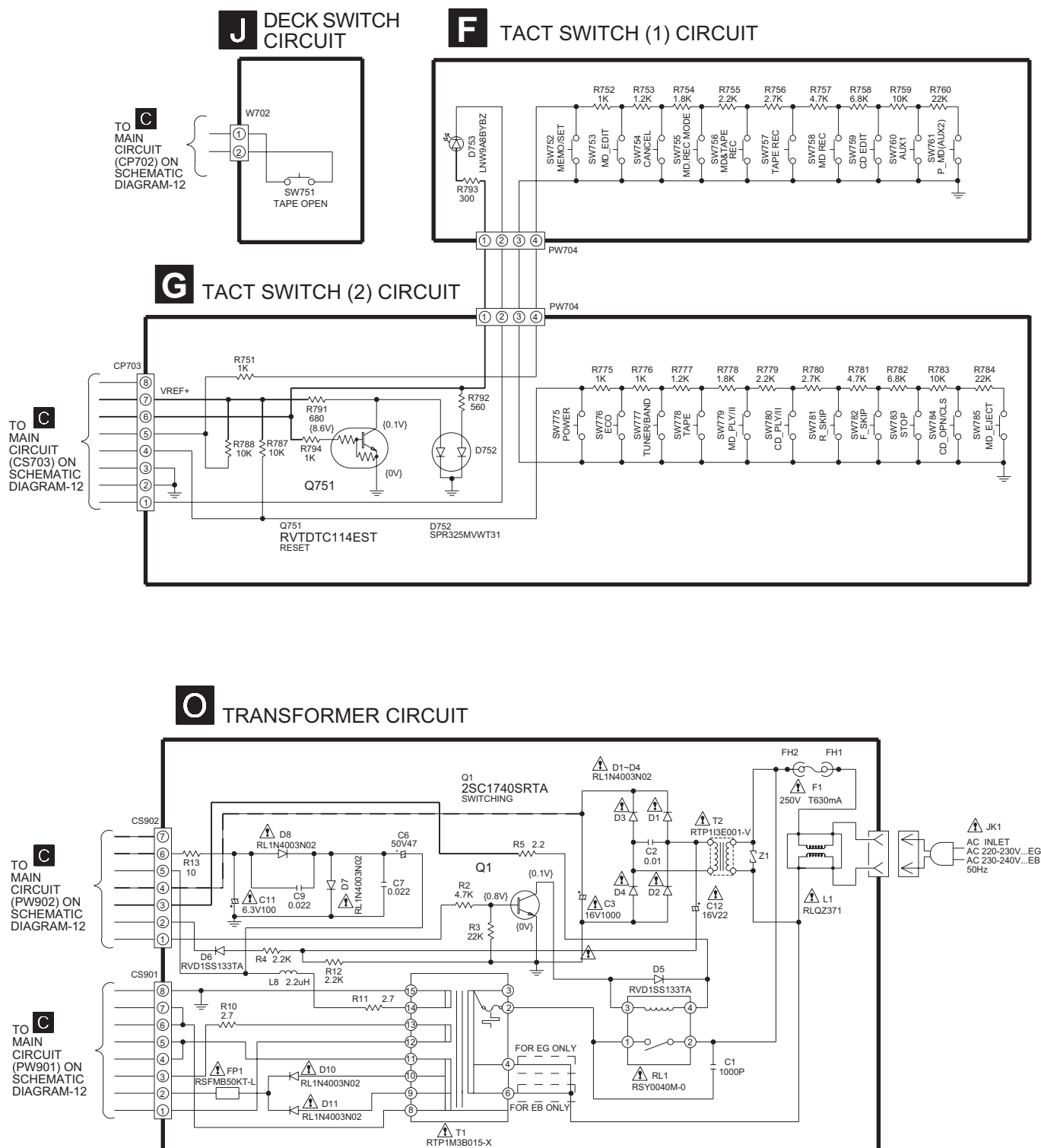
SCHEMATIC DIAGRAM-15



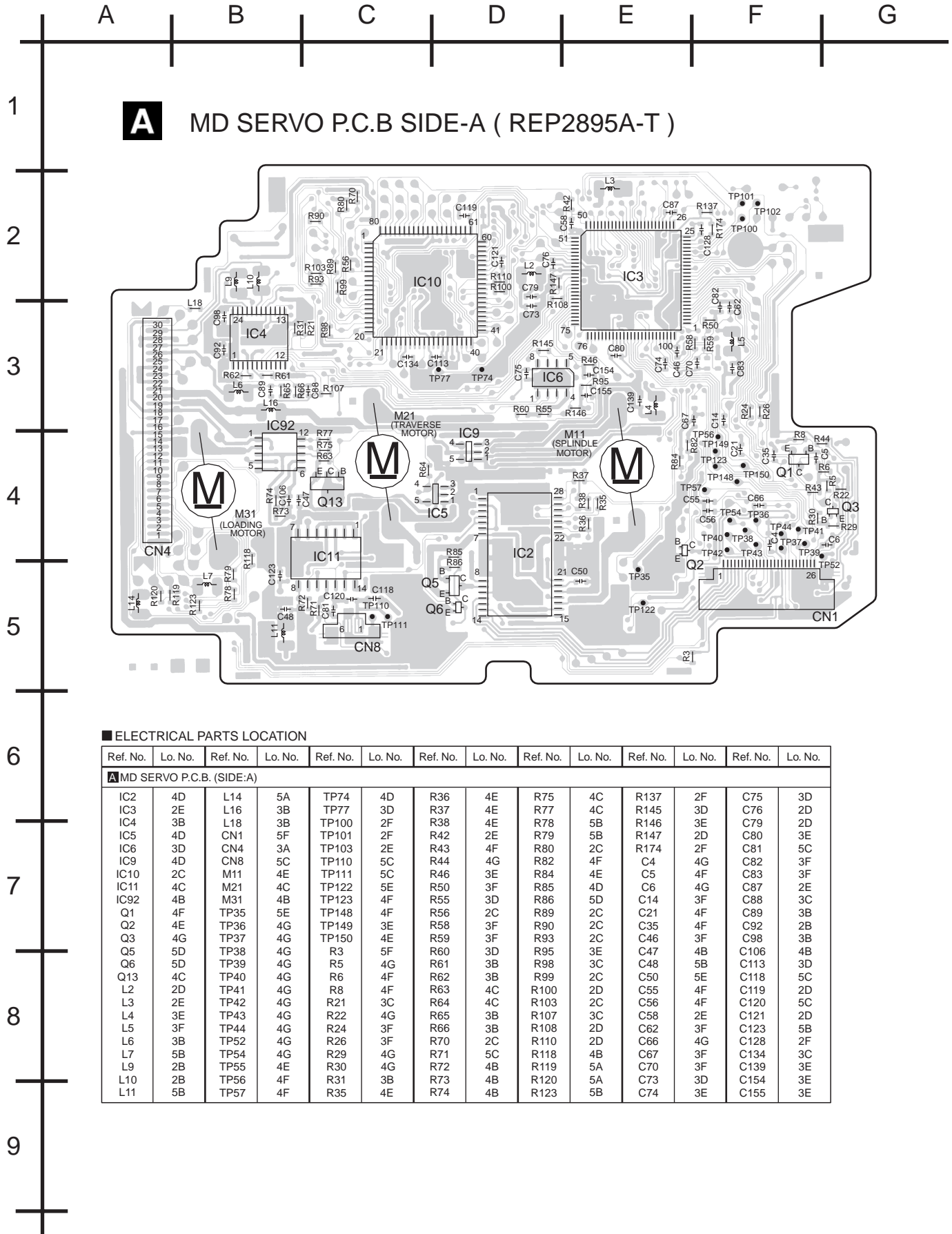
14.8. (F) Tact Switch (1) Circuit (G) Tact Switch (2) Circuit (J) Deck Switch Circuit (O) Transformer Circuit

SCHEMATIC DIAGRAM-16

— : +B Signal Line



15 Printed Circuit Board



A B C D E F G

1

A MD SERVO P.C.B SIDE-B (REP2895A-T)

2

3

4

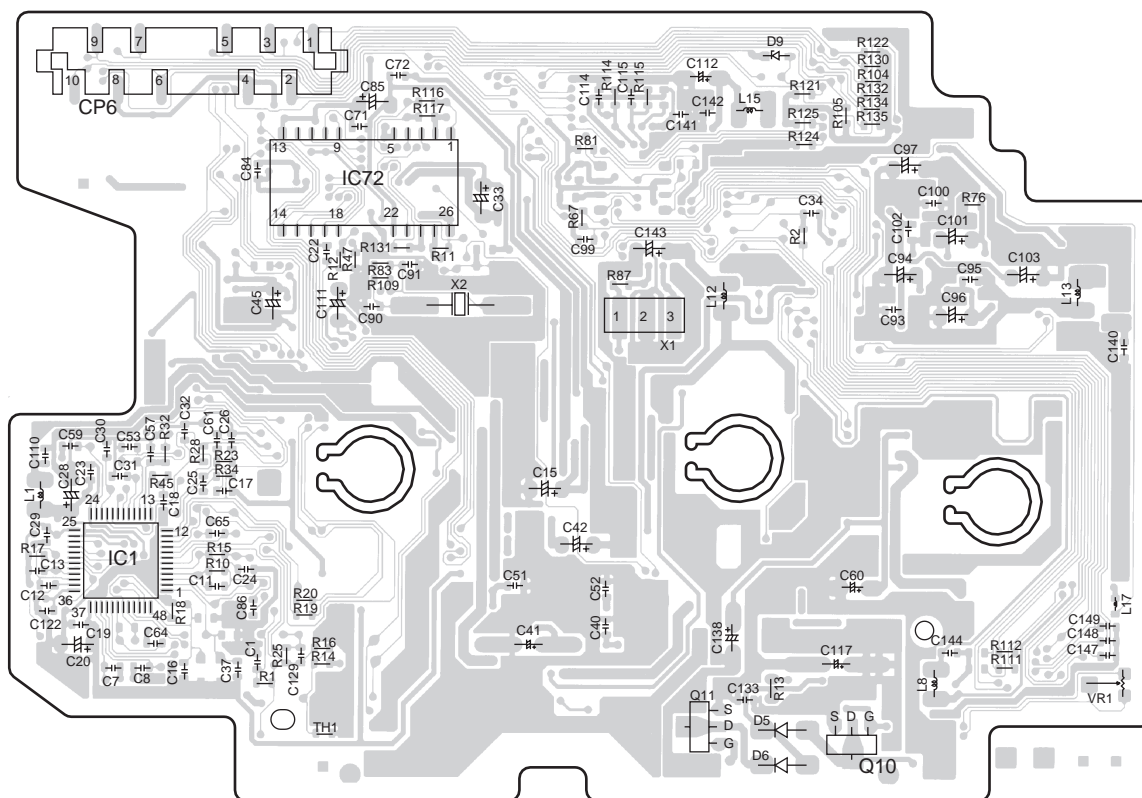
5

6

7

8

9

**■ ELECTRICAL PARTS LOCATION**

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
A MD SERVO P.C.B. (SIDE:B)											
IC1	4A	R13	5E	R111	5F	C17	4B	C53	3F	C103	3F
IC72	2C	R14	2E	R112	5F	C18	4B	C57	4B	C110	4A
Q10	5E	R15	4B	R114	2D	C19	5A	C59	4A	C111	3C
Q11	5E	R16	5C	R115	2D	C20	5A	C60	5E	C112	2E
D5	5E	R17	4A	R116	2C	C22	3C	C61	4B	C114	2D
D6	5E	R18	5B	R117	2C	C23	4A	C64	5B	C115	2D
D9	2E	R19	5B	R121	2E	C24	4B	C65	4B	C117	5E
VR1	5G	R20	5B	R122	2F	C25	4B	C71	2C	C122	5A
TH1	5C	R23	4B	R124	2E	C26	4B	C72	2C	C129	5B
L1	4A	R25	5B	R125	2E	C28	4A	C84	2B	C133	5E
L8	5F	R28	4B	R130	2F	C29	4A	C85	2C	C138	5E
L12	3E	R32	4B	R131	3C	C30	4A	C86	5B	C140	3G
L13	3G	R34	4B	R132	2F	C31	4A	C90	3C	C141	2D
L15	2E	R45	4B	R134	2F	C32	4B	C91	3C	C142	2E
L17	5G	R47	3C	R135	2F	C33	2D	C93	3F	C143	3D
X1	3D	R67	3D	C1	5B	C34	2E	C94	3F	C144	5F
X2	3C	R76	4B	C7	5B	C37	5B	C95	3F	C147	5G
CP6	2A	R81	2D	C8	5B	C40	5D	C96	3F	C148	5G
R1	5B	R83	3C	C11	4B	C41	5D	C97	2F	C149	5G
R2	3E	R87	3D	C12	4A	C42	4D	C99	3D		
R10	4B	R104	2F	C13	4A	C45	3B	C100	3F		
R11	3C	R105	2E	C15	4D	C51	5D	C101	3F		
R12	3C	R109	3C	C16	5B	C52	5D	C102	3F		

A B C D E F G

1

C MAIN P.C.B (REP2857A)

2

3

4

5

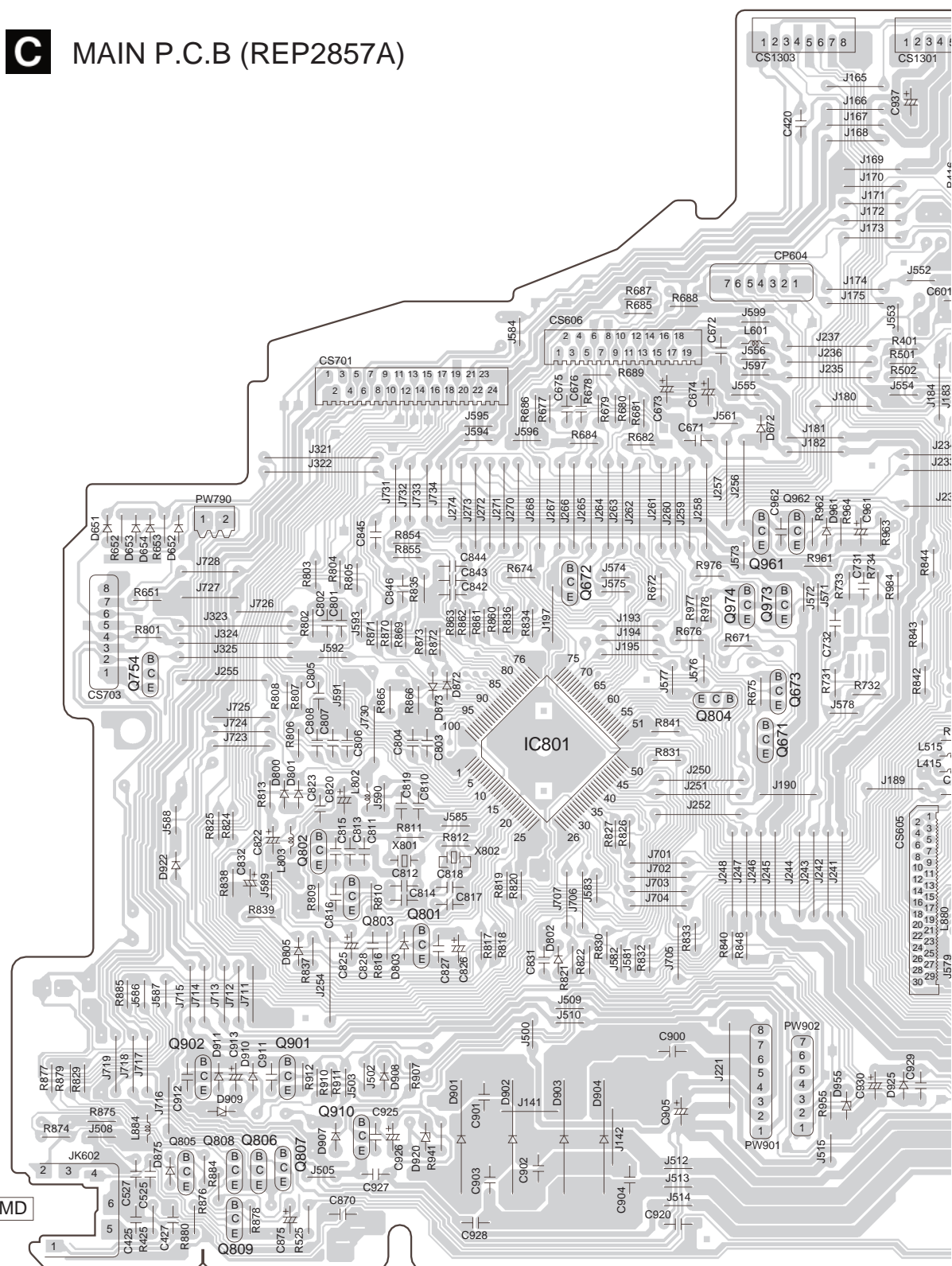
6

7

8

9

P-MD



G

H

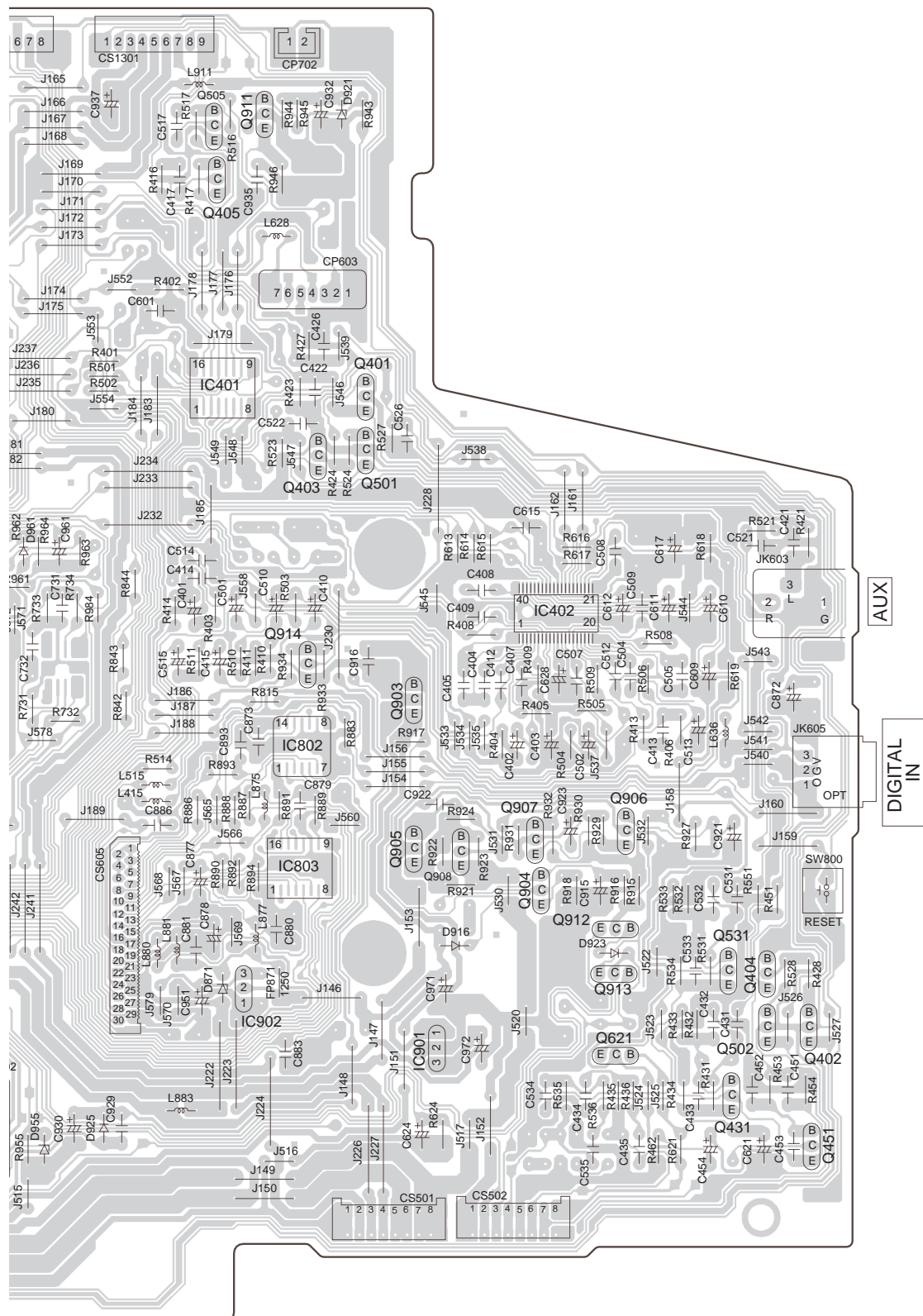
I

J

K

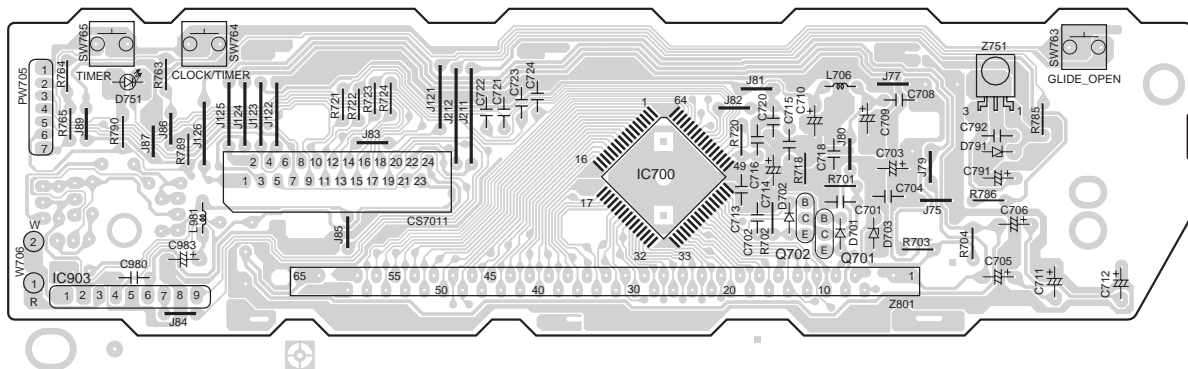
L

M

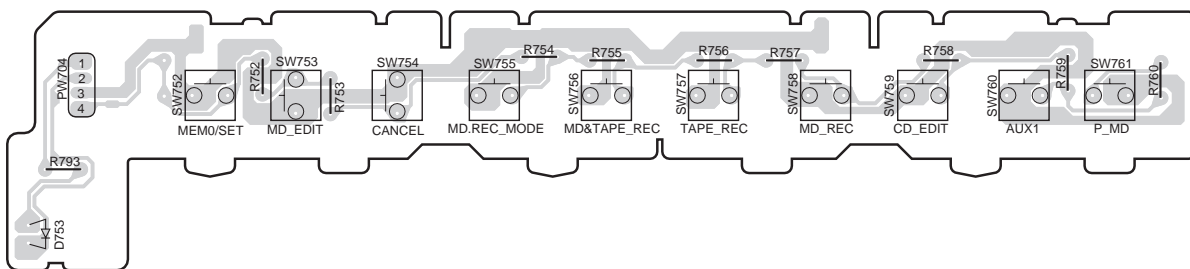


A B C D E F G

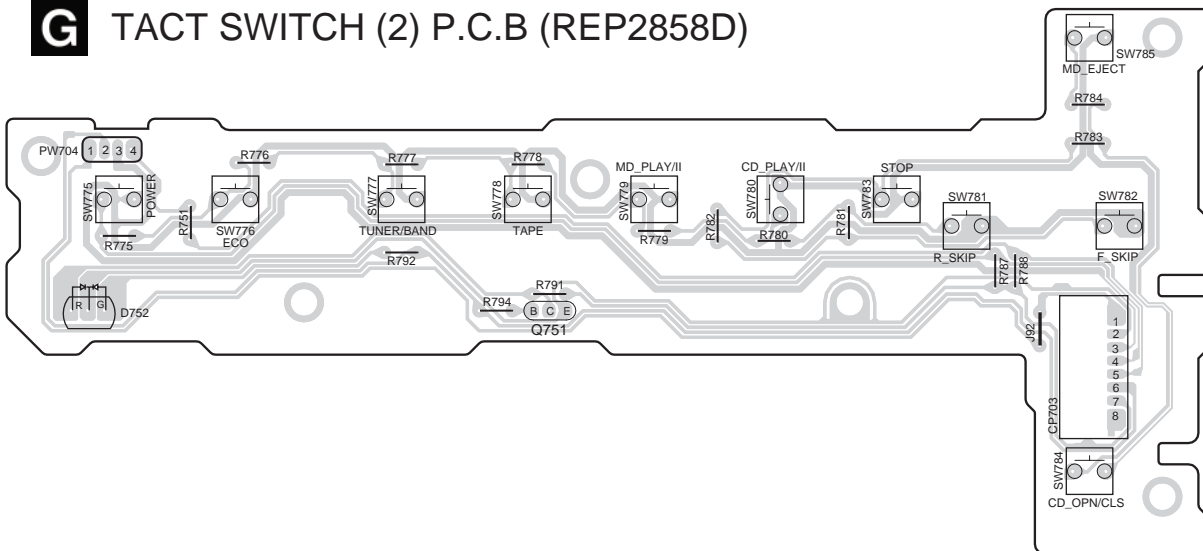
1 **D** FL P.C.B (REP2858D)

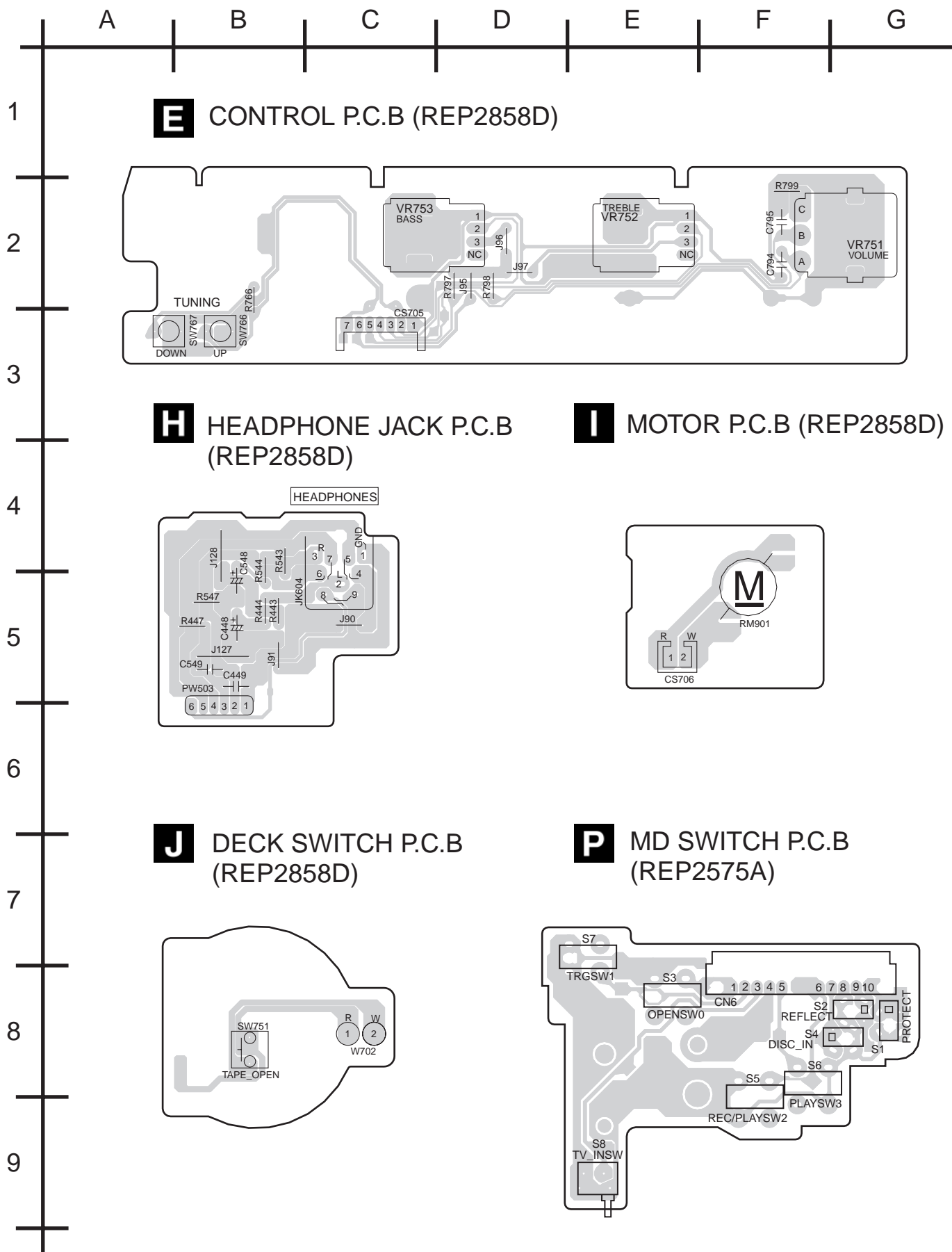


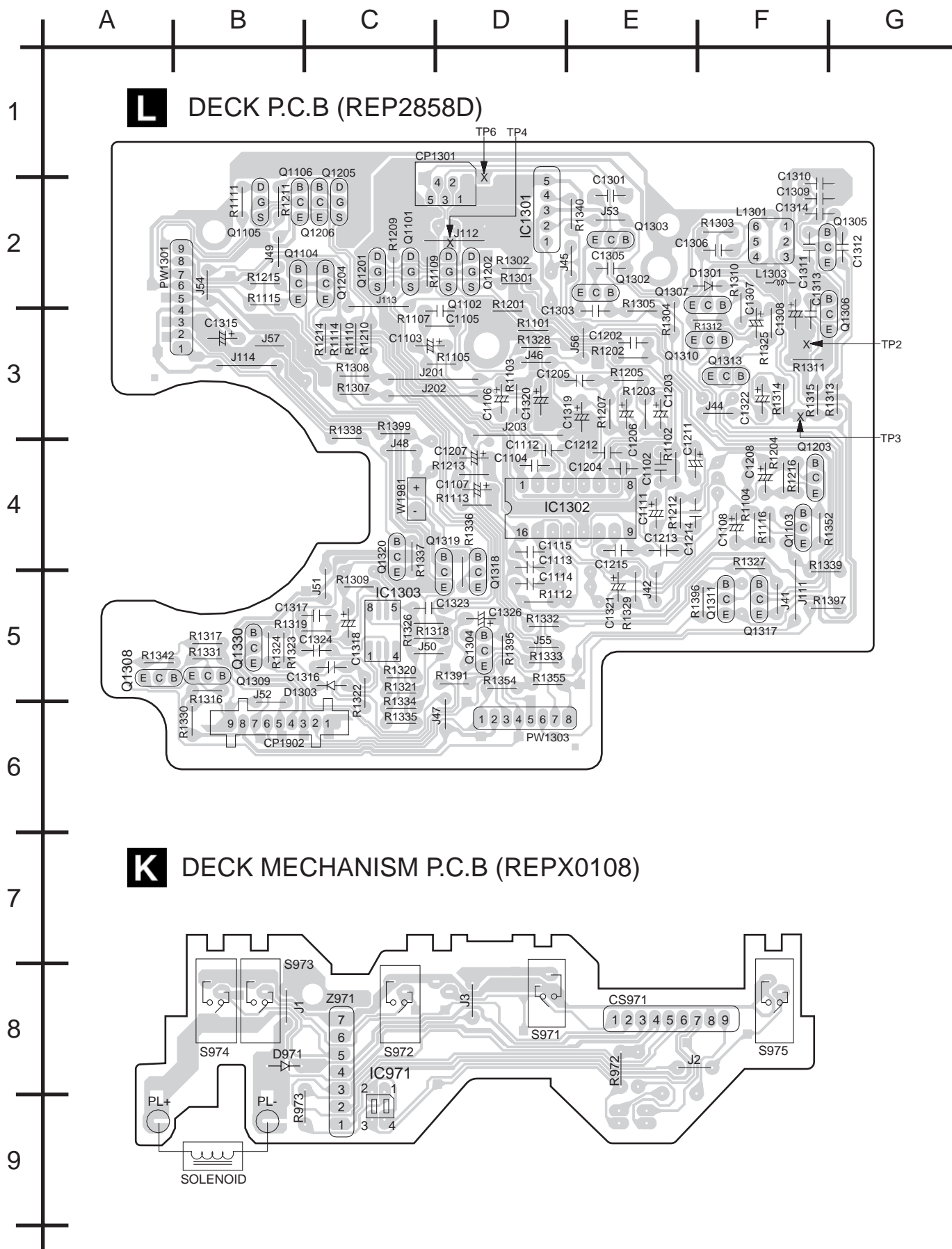
F TACT SWITCH (1) P.C.B (REP2858D)

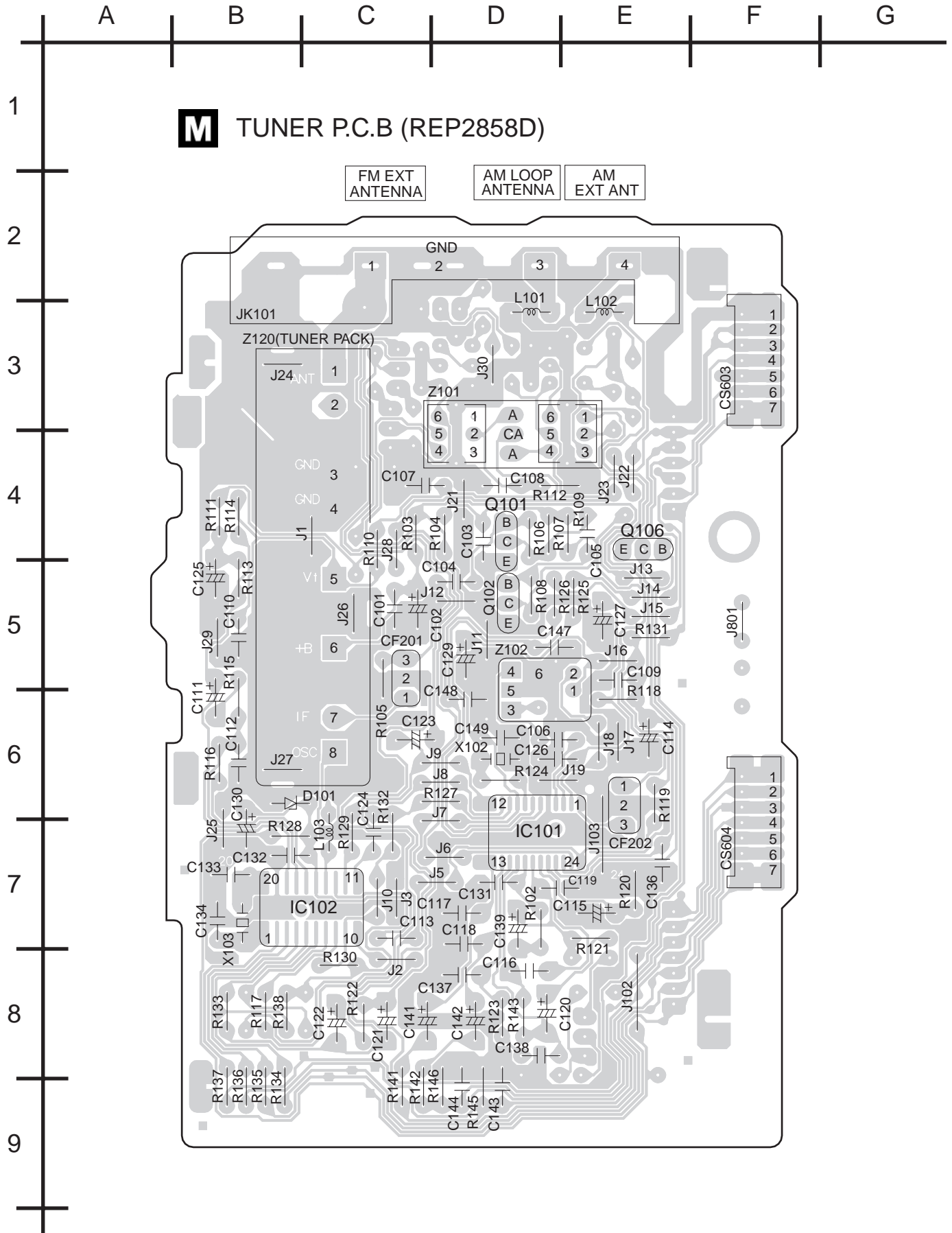


G TACT SWITCH (2) P.C.B (REP2858D)









A B C D E F G

1

N POWER P.C.B (REP2857A)

2

3

4

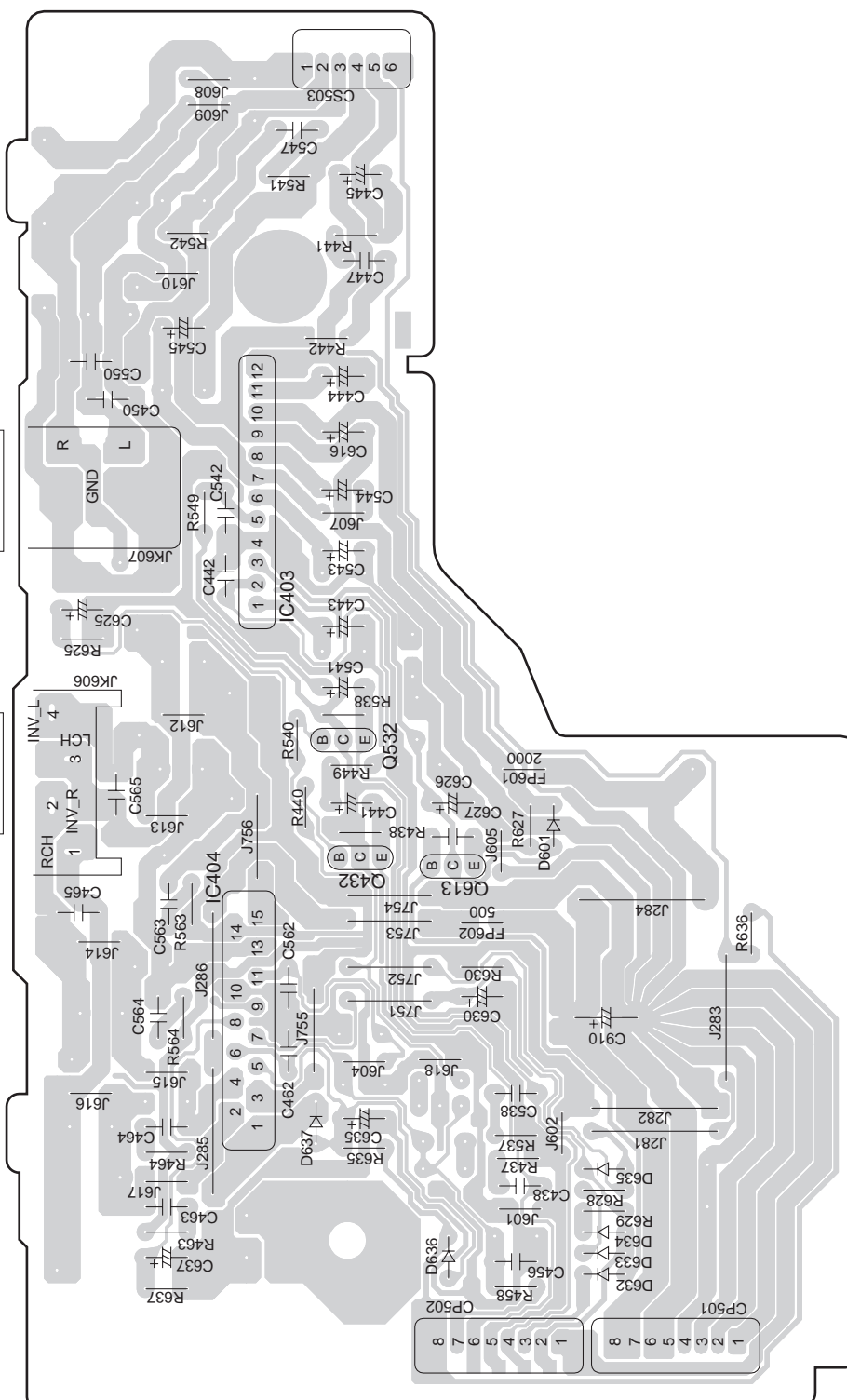
5

6

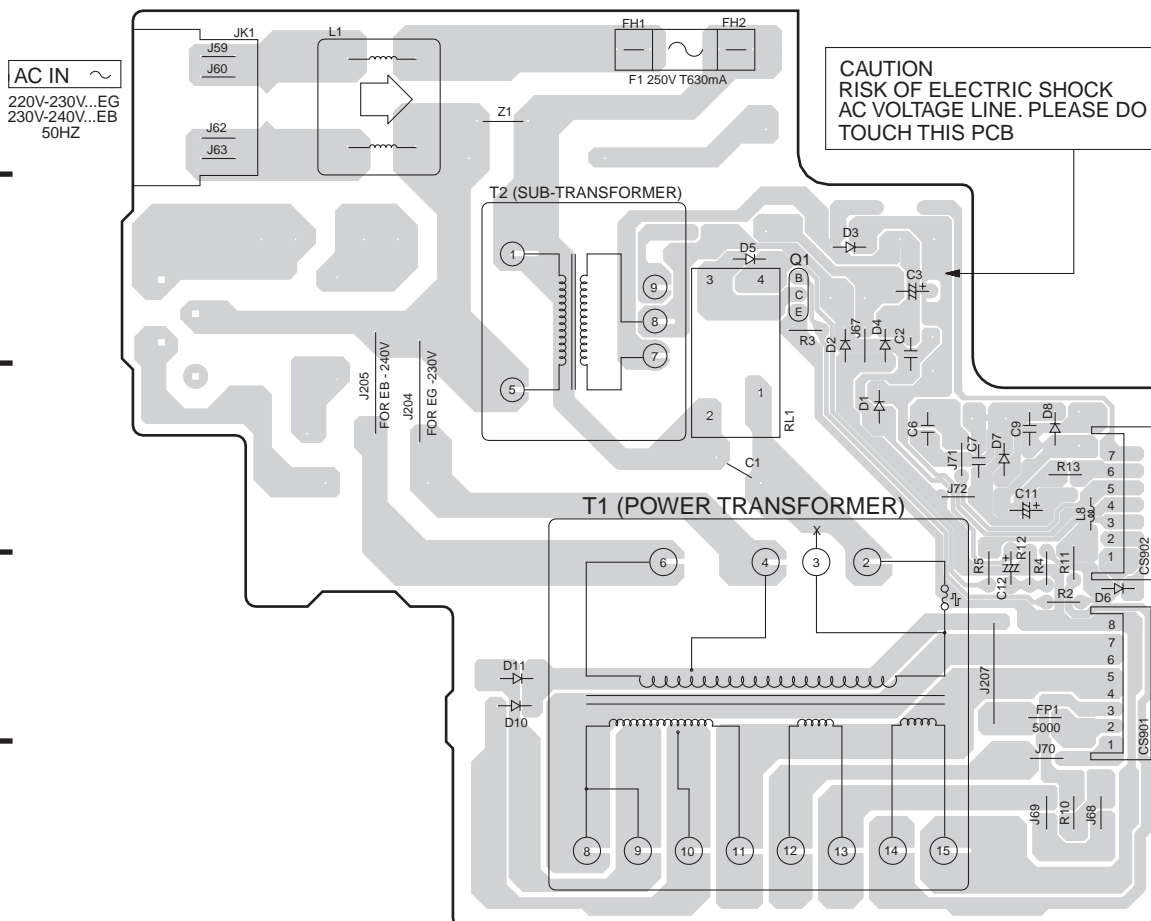
7

8

9

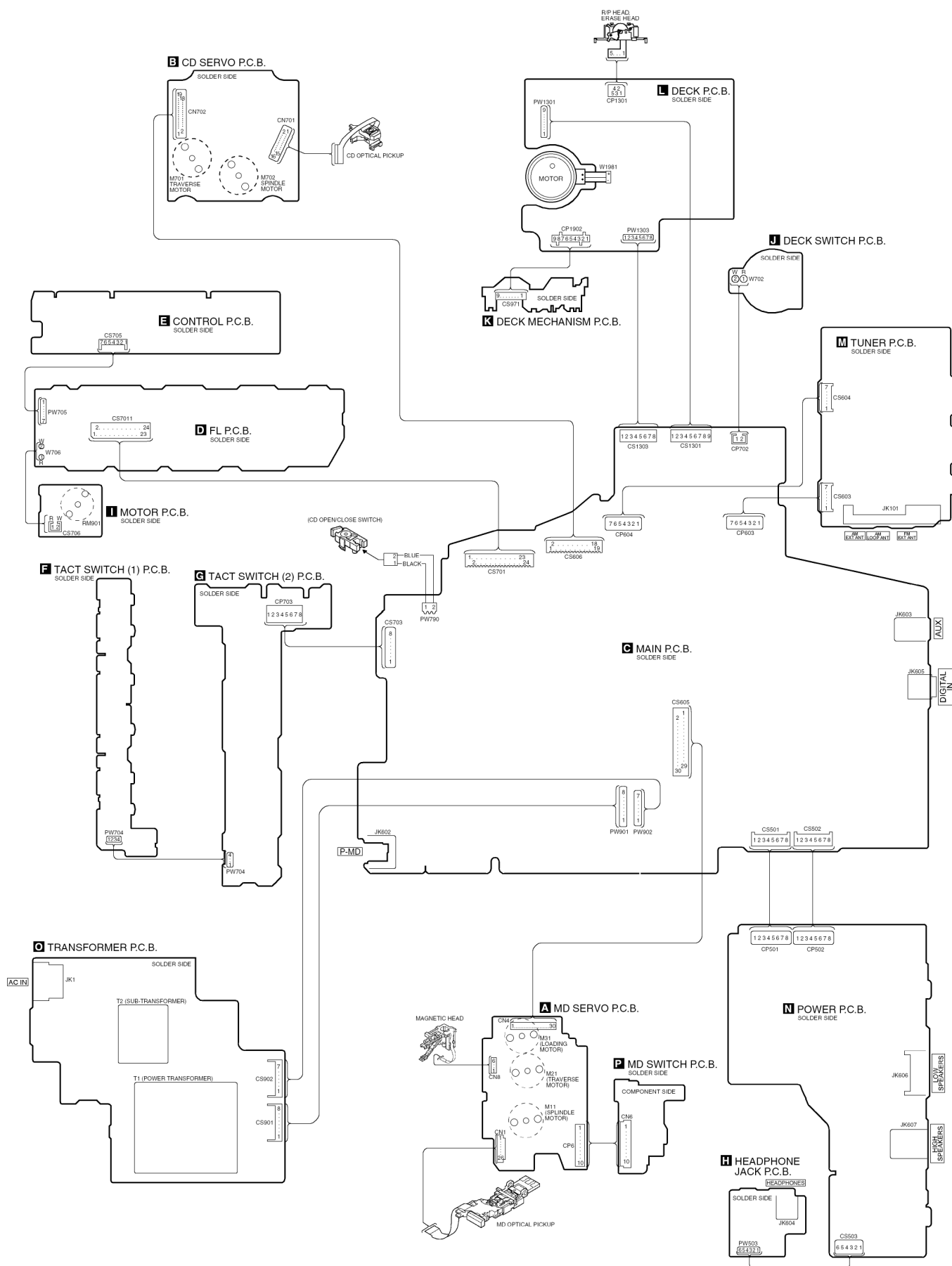
HIGH
SPEAKERSLOW
SPEAKERS

TRANSFORMER P.C.B (REP2858D)

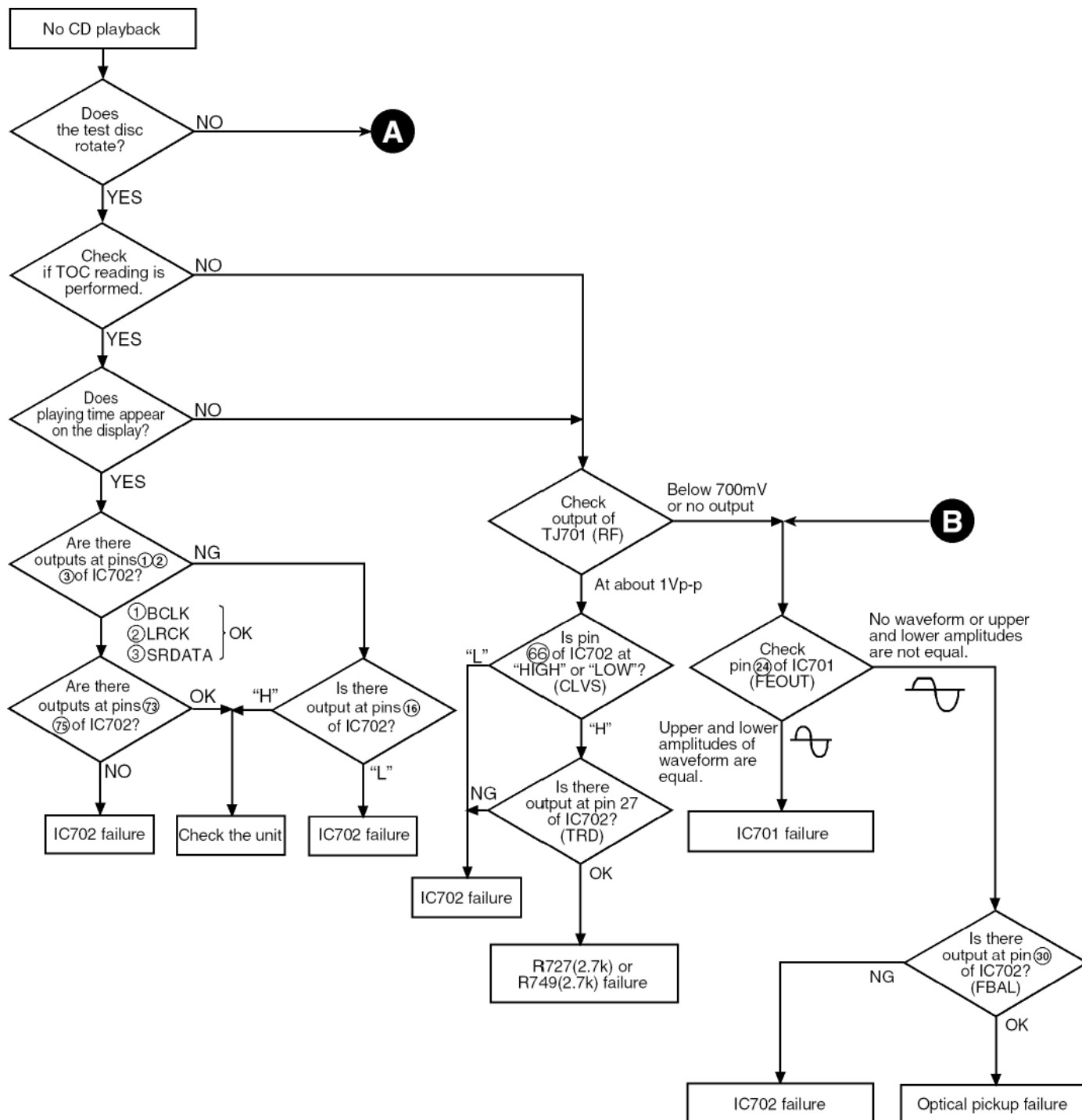


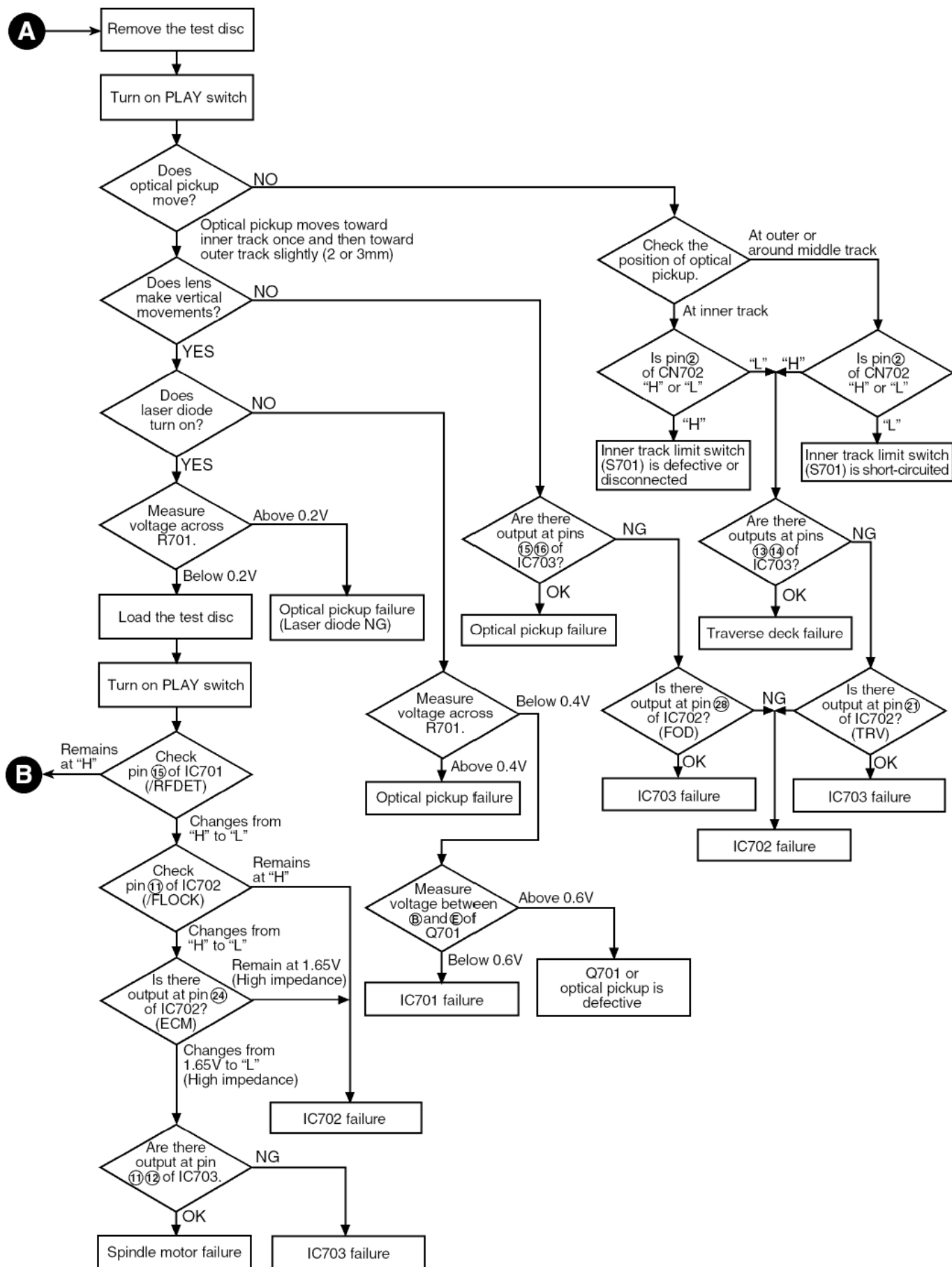
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE. PLEASE DO NOT
TOUCH THIS PCB

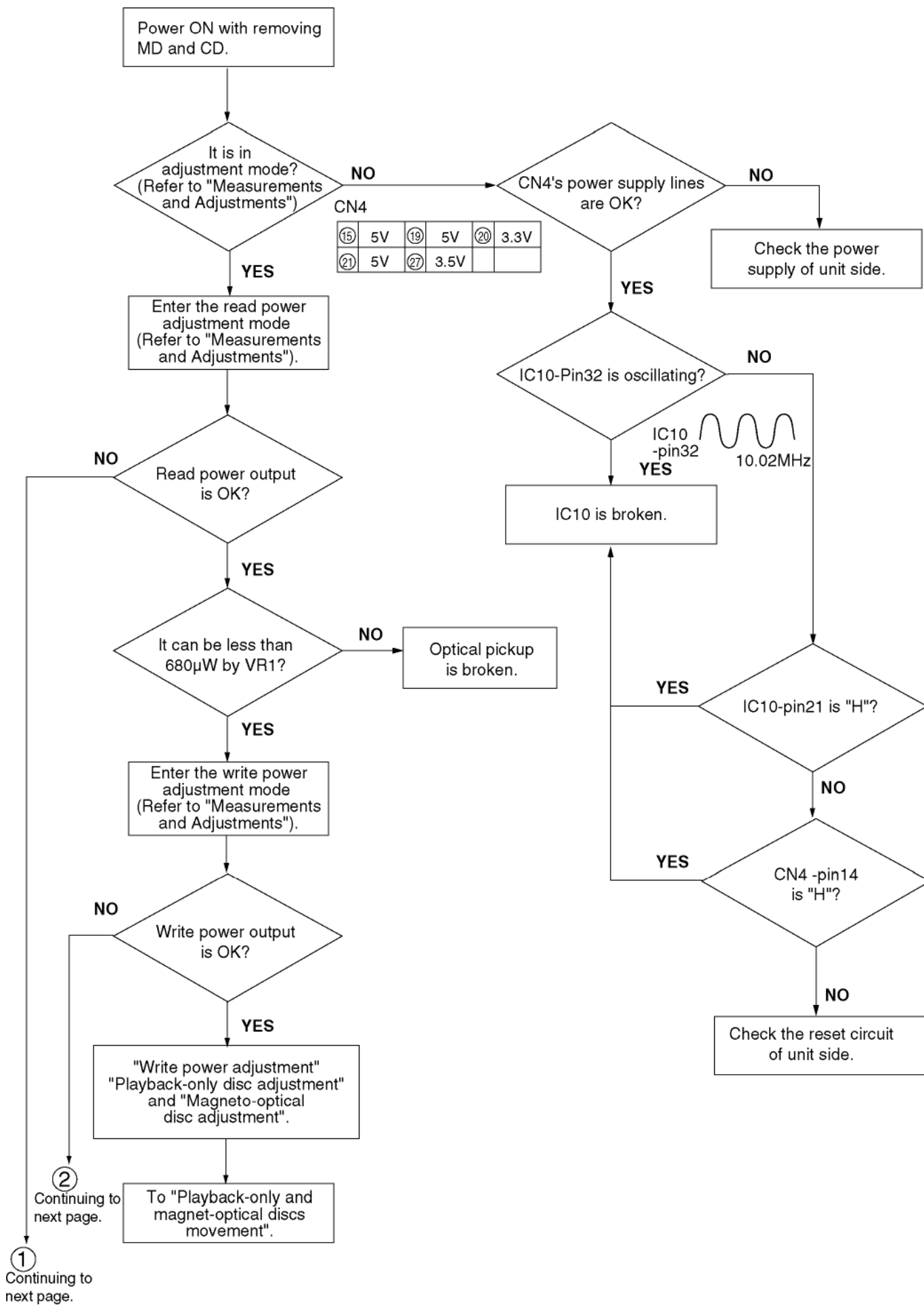
16 Wiring Connection Diagram

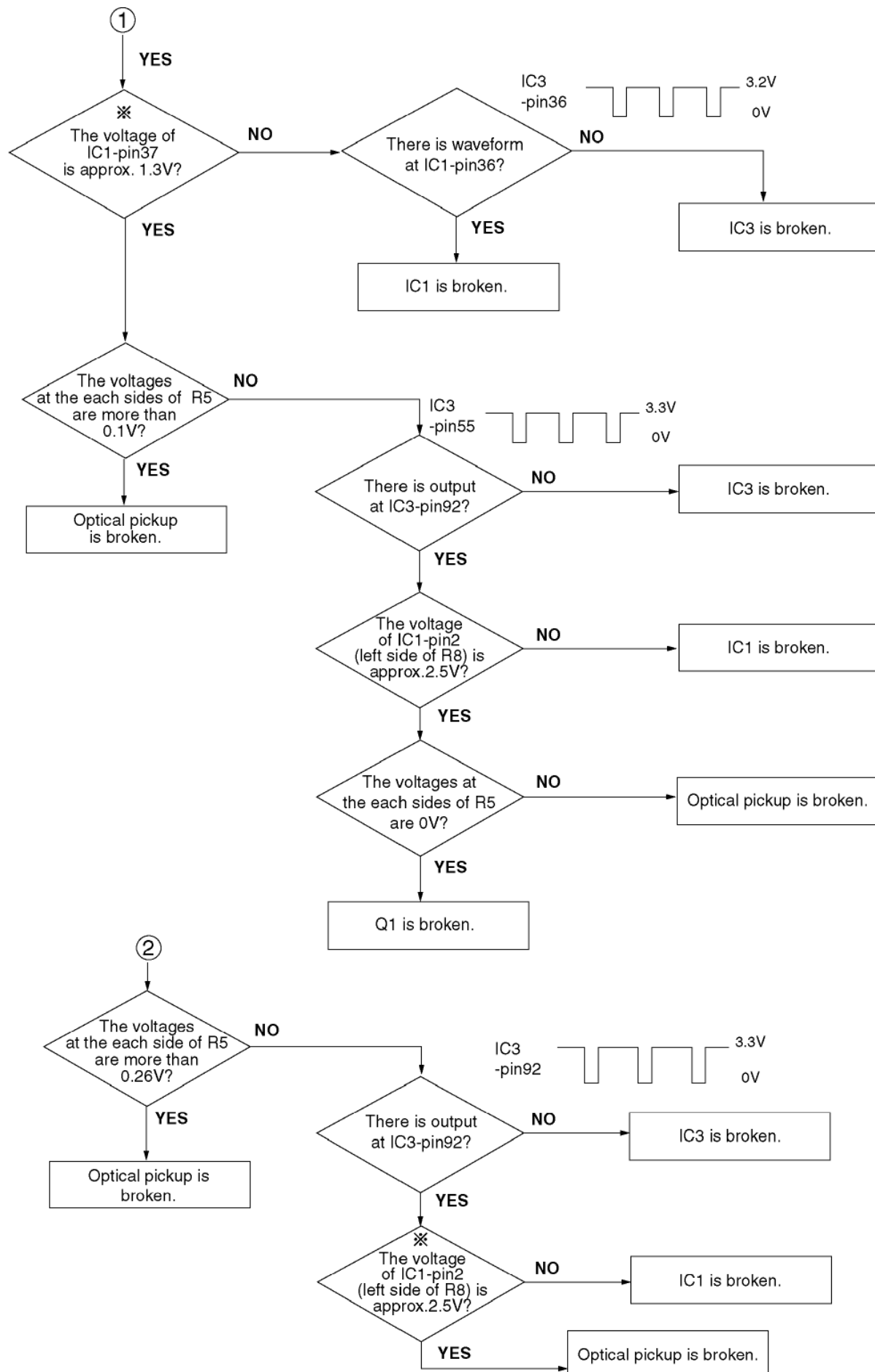


17 Troubleshooting Guide

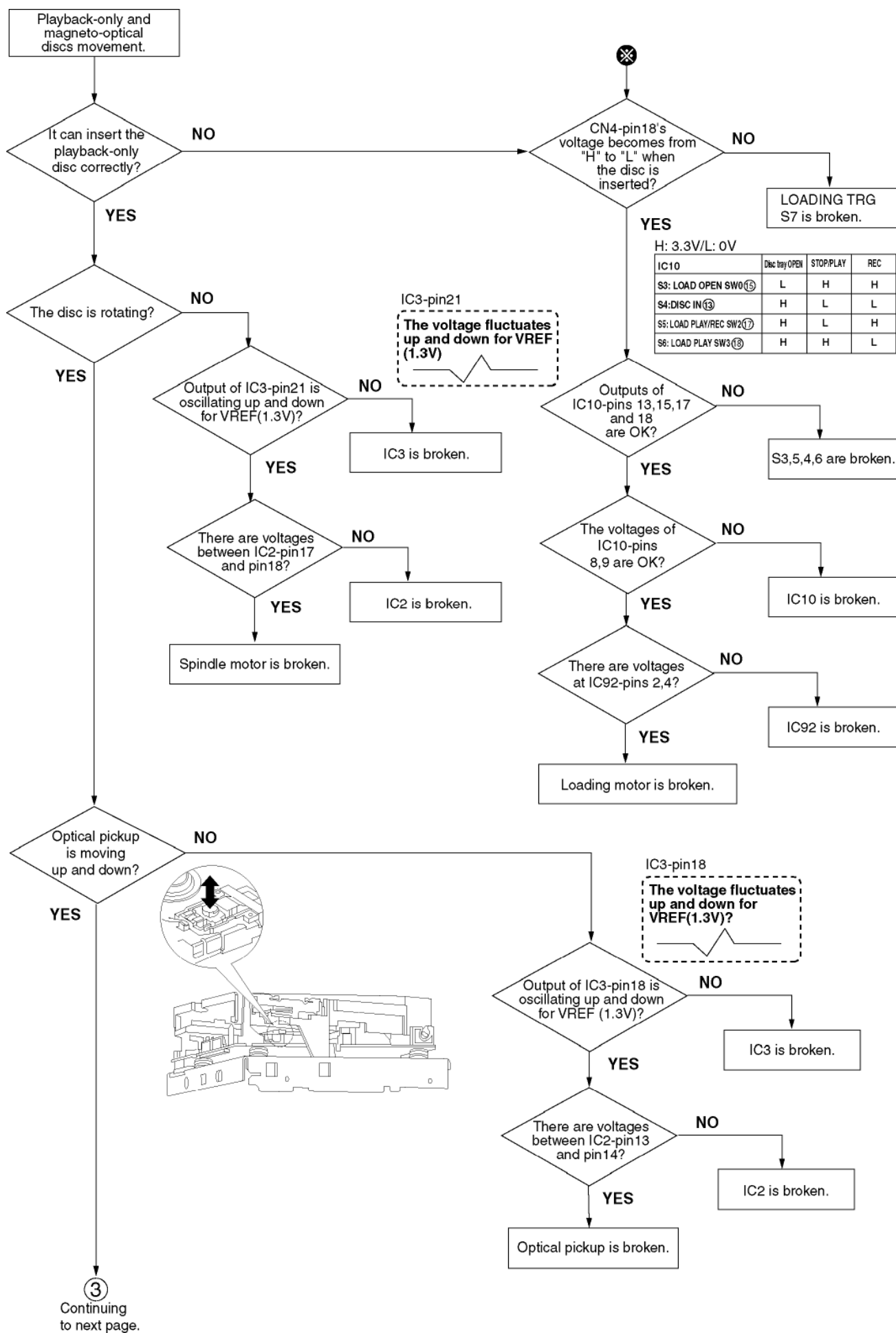


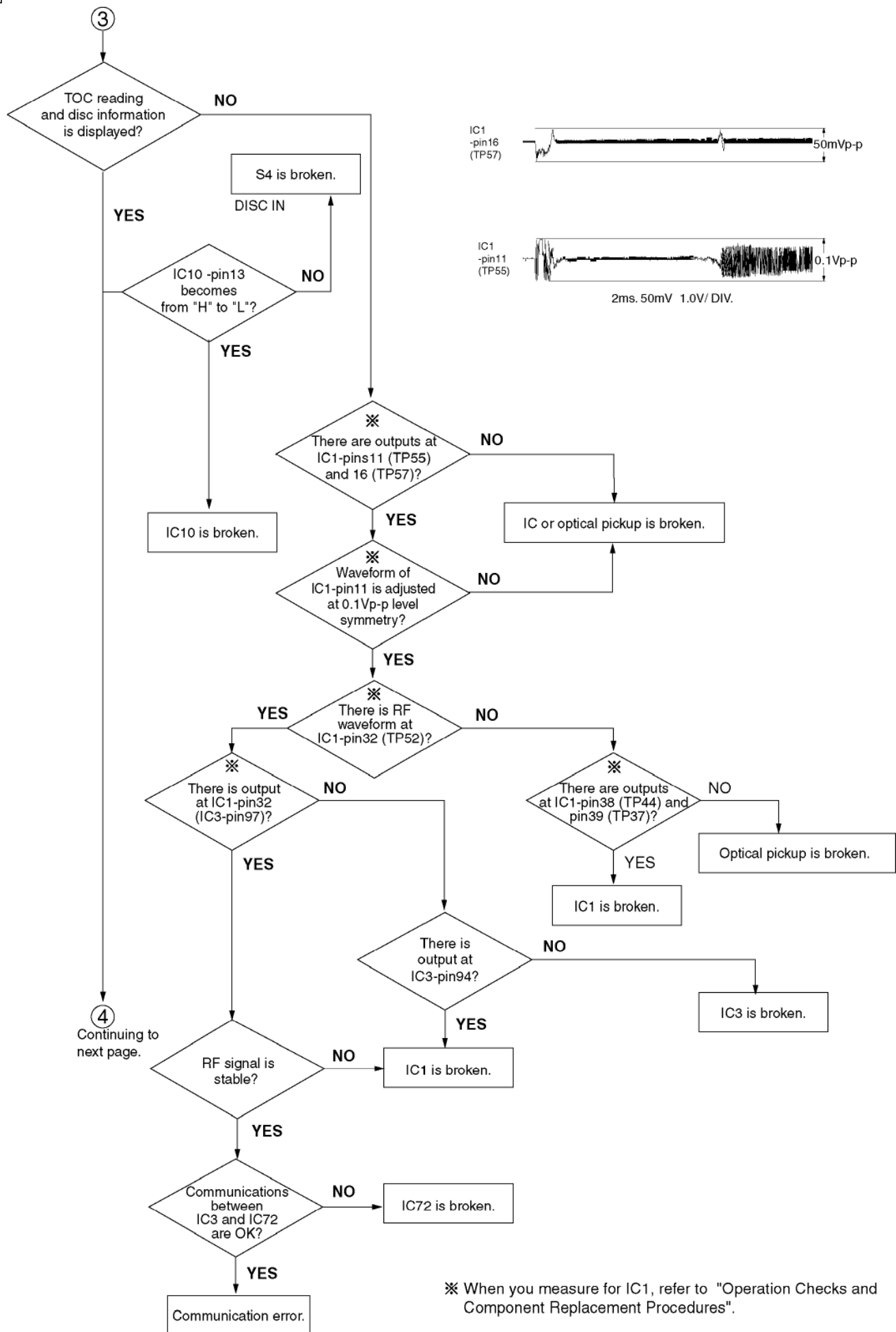


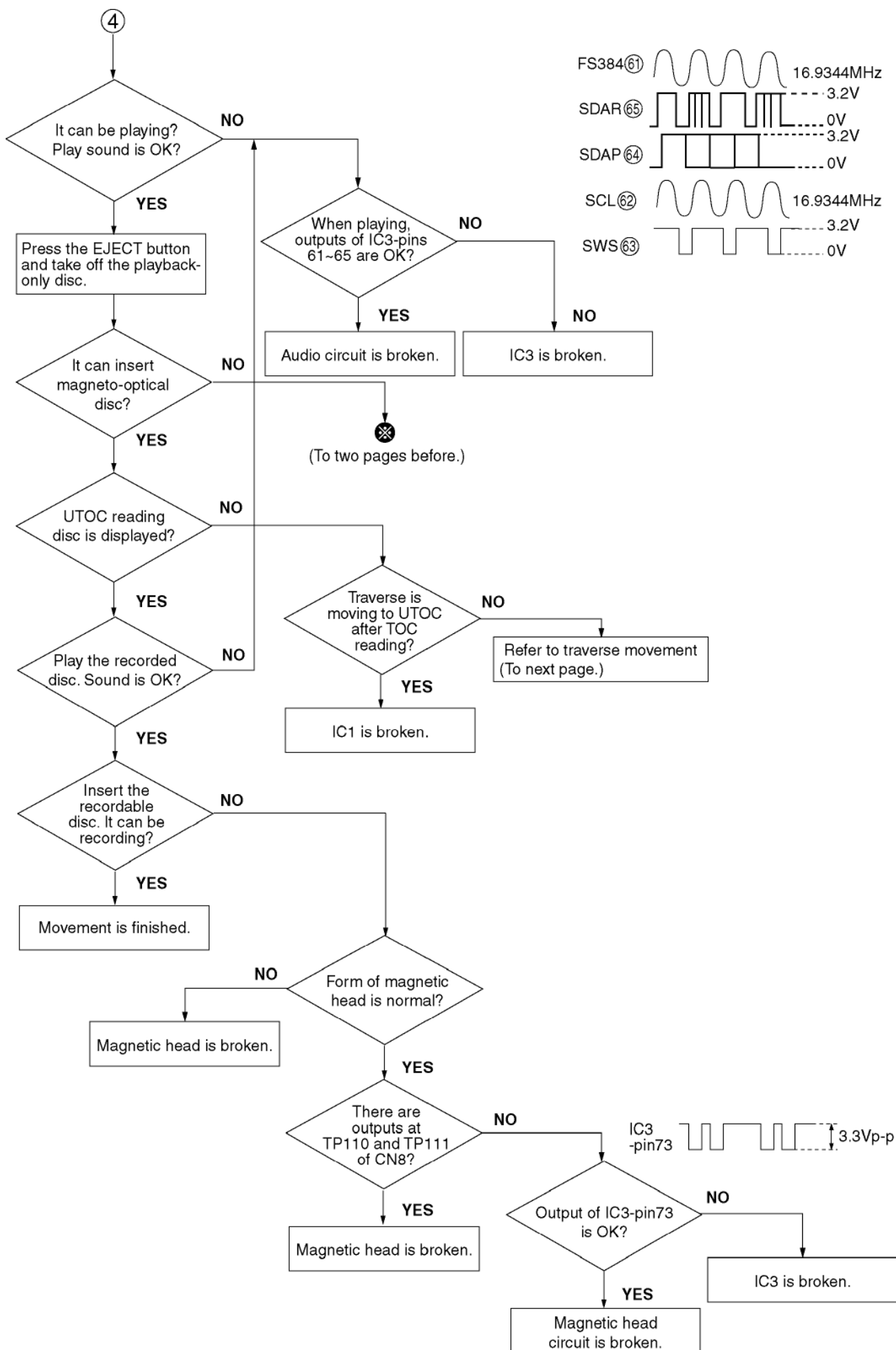


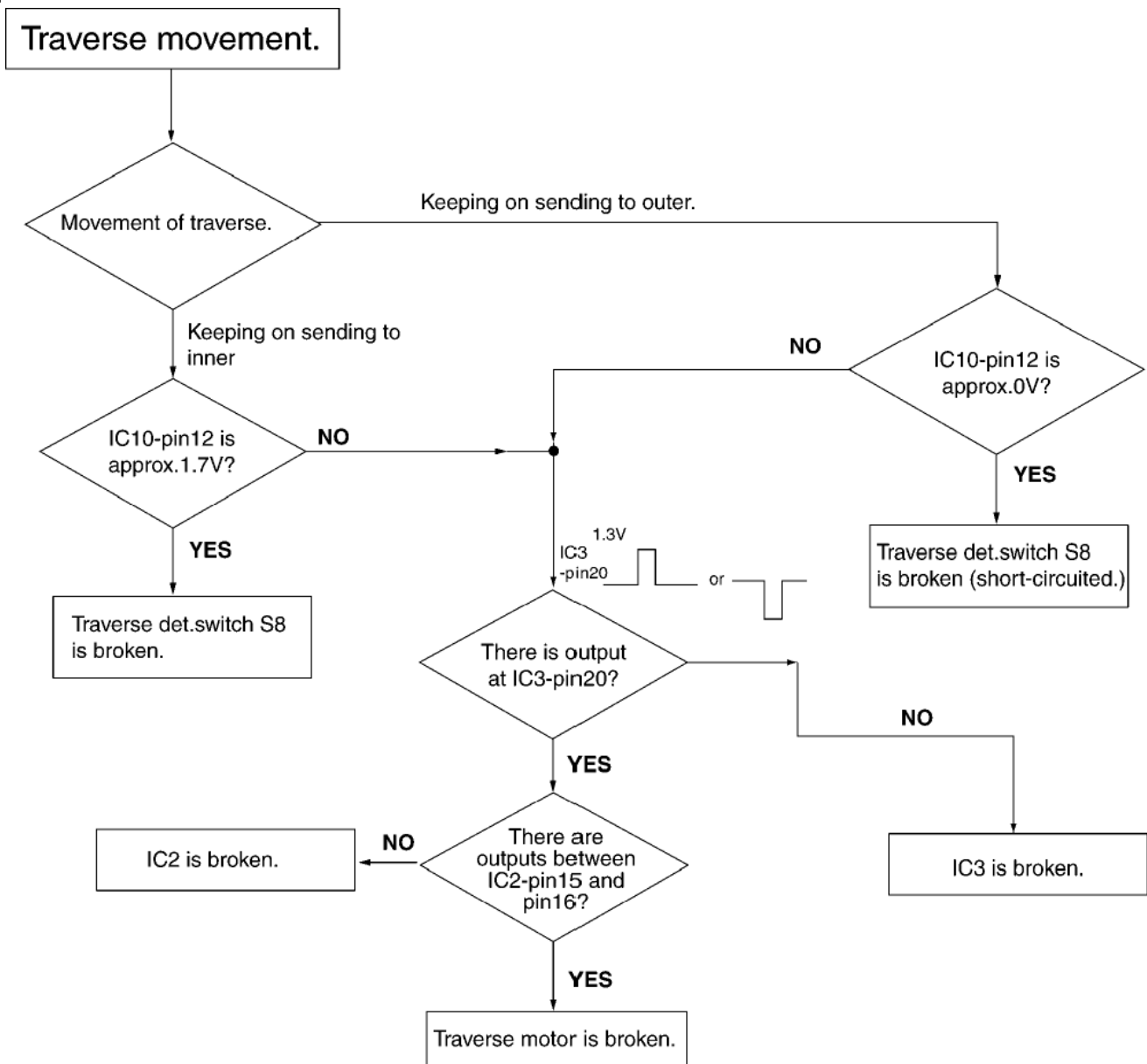


✖ When you measure for IC1, refer to "Operation Checks and Component Replacement Procedures".









18 Parts Location and Replacement Parts List

Notes:

- Important safety notice:

Components identified by \triangle mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.

When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)
Parts without these indications can be used for all areas.
- Warning: This product uses a laser diode. Refer to caution statements on page 3.

ACTUNG:

– Die Lasereinheit nicht zerlegen.

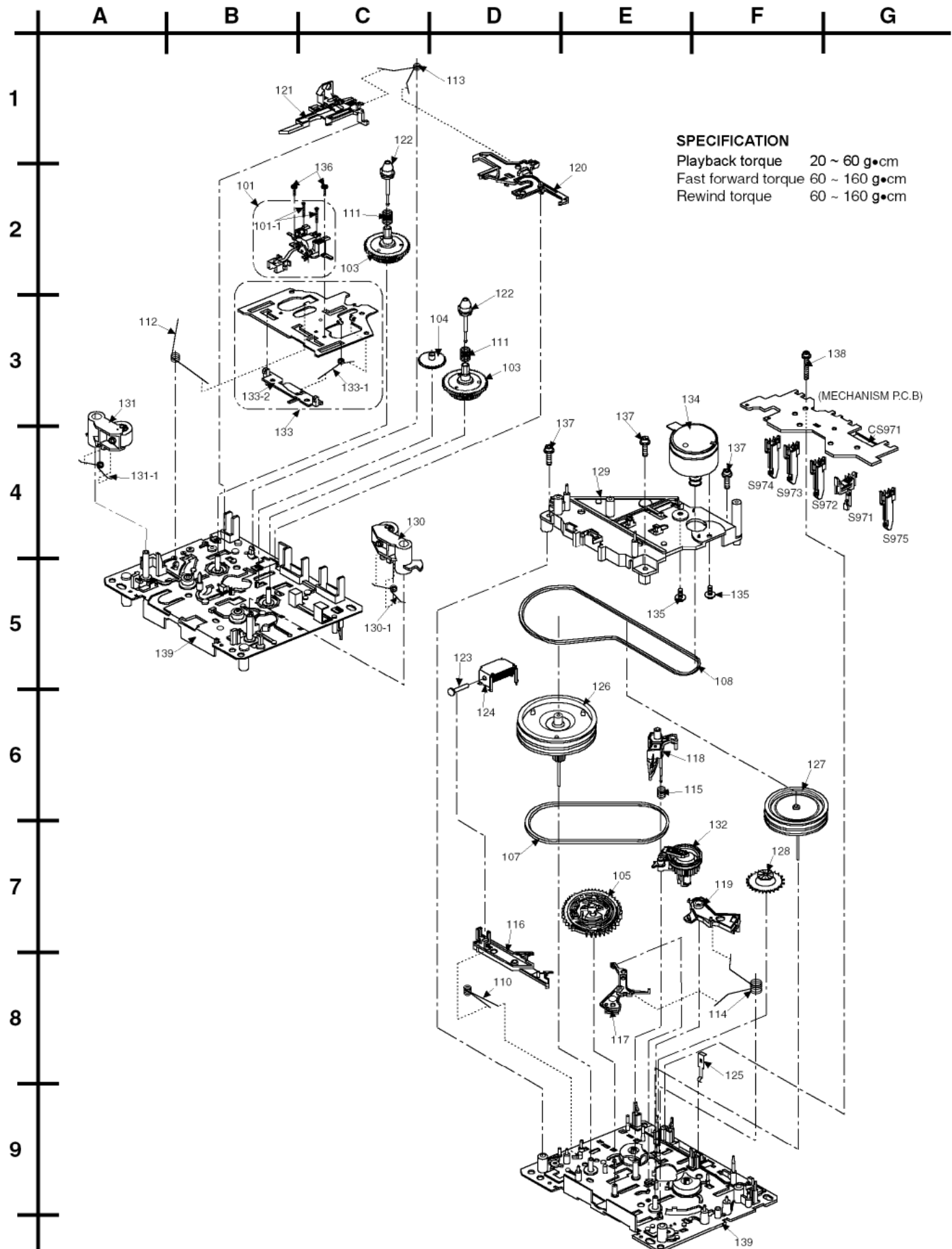
– Die Lasereinheit darf nur gegen eine vom Hersteller spezifizierte Einheit ausgetauscht werden.

- Capacitor values are in microfarads (μ F) unless specified otherwise, P= Pico-farads (pF), F= Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
- [M] Indicates in the Remarks columns indicates parts supplied by **MESA**.
- The "(SF)" mark denotes the standard part.
- Remote Control Unit: Supply period for three years from terminal of production.
- Reference for O/I book languages are as follows:

Ar :	Arabic	Du :	Dutch	It :	Italian	Sp :	Spanish
Cf :	Canadian French	En :	English	Ko :	Korean	Sw :	Swedish
Cz :	Czech	Fr :	French	Po :	Polish	Co :	Traditional Chinese
Da :	Danish	Ge :	German	Ru :	Russian	Cn :	Simplified Chinese

18.1. Deck Mechanism (RAA4106)

18.1.1. Deck Mechanism Parts Location



18.1.2. Deck Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0043	R/P HEAD BLOCK UNIT	[M]
101-1	RHD17015	SCREW	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0034-1	CAPSTAN BELT 'A'	[M]
110	RMB0312	TRIGGER LEVEL SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAD PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SP	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0049	FLYWHEEL 'F' ASS'Y	[M]
127	RXF0050	FLYWHEEL 'R' ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283A-J	SUB CHASSIS	[M]
130	RXL0124	PINCH ARM 'F' ASS'Y	[M]
130-1	RMB0401	PINCH ARM SPRING 'F'	[M]
131	RXL0125	PINCH ARM 'R' ASS'Y	[M]
131-1	RMB0402	PINCH ARM SPRING 'R'	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412	HEAD PANEL ASS'Y	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	RFKPXES50GCK	CAP MOTOR ASS'Y	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCRE	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJSTR280PP	CHASSIS ASS'Y	[M]

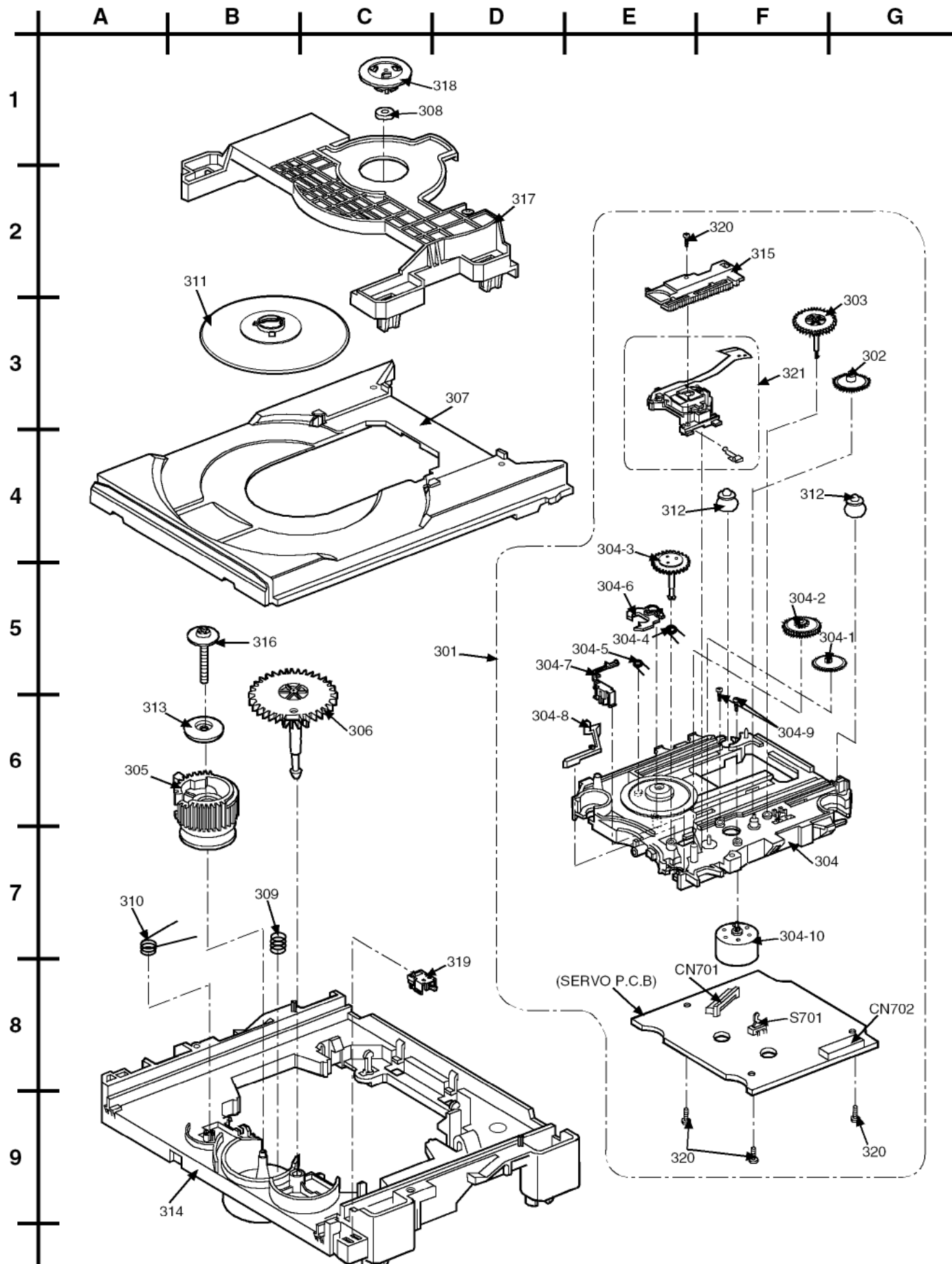
18.2.2. MD Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
401	RED0047	RECORDING HEAD	[M]
402	RHD17021	NUT PLATE SCREW	[M]
403	RHD17022	RECORDING HEAD SCREW	[M]
404	RMC0348	THRUST SPRING	[M]
405	RMC0349	NUT PLATE SPRING	[M]
406	RML0515	HEAD SHIFTER	[M]
407	RMQ0750	REF BASE	[M]
408	RMQ0751	NUT PLATE	[M]
409	RMS0611	MAIN SHAFT	[M]
410	RXJ0021	DRIVE SHAFT ASS'Y	[M]
411	RXX0249	MECHA CHASSIS UNIT	[M]
411-1	RDV0055	BELT	[M]
411-2	REM0077	TRVERSE MOTOR ASS'Y	[M]
411-3	REM0078	LOADING MOTOR ASS'Y	[M]
411-4	RMB0548	HOLDER SPRING	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
411-5	RMQ0752	PIN A (BLACK)	[M]
411-6	RMQ0753	PIN B (NATURAL)	[M]
411-7	XQN17+C25FZ	MOTOR SCREW	[M]
411-8	XYC2+FF105	PCB SCREW	[M]
412	RAF1700A	MD OPU	[M]
413	XTW2+6S	SCREW	[M]
414	RHD20053	SCREW	[M]
415	RMB0504	DAMPER SPRING	[M]
416	RMG0447-K	DAMPER	[M]
417	XTN17+6GFZ	REF. BASE SCREW	[M]
418	RML0514	LOCK LEVER	[M]
419	RMM0199	SLIDER	[M]
420	RMM0200	SHUTTER RUBBER	[M]
421	RMRL118-K2	HOLDER	[M]
422	RMB0547-1	LOCK LEVEL SPRING	[M]
423	RMA1117-J	MECHA BASE FRAME	[M]

18.3. CD Loading Mechanism

18.3.1. CD Loading Mechanism Parts Location

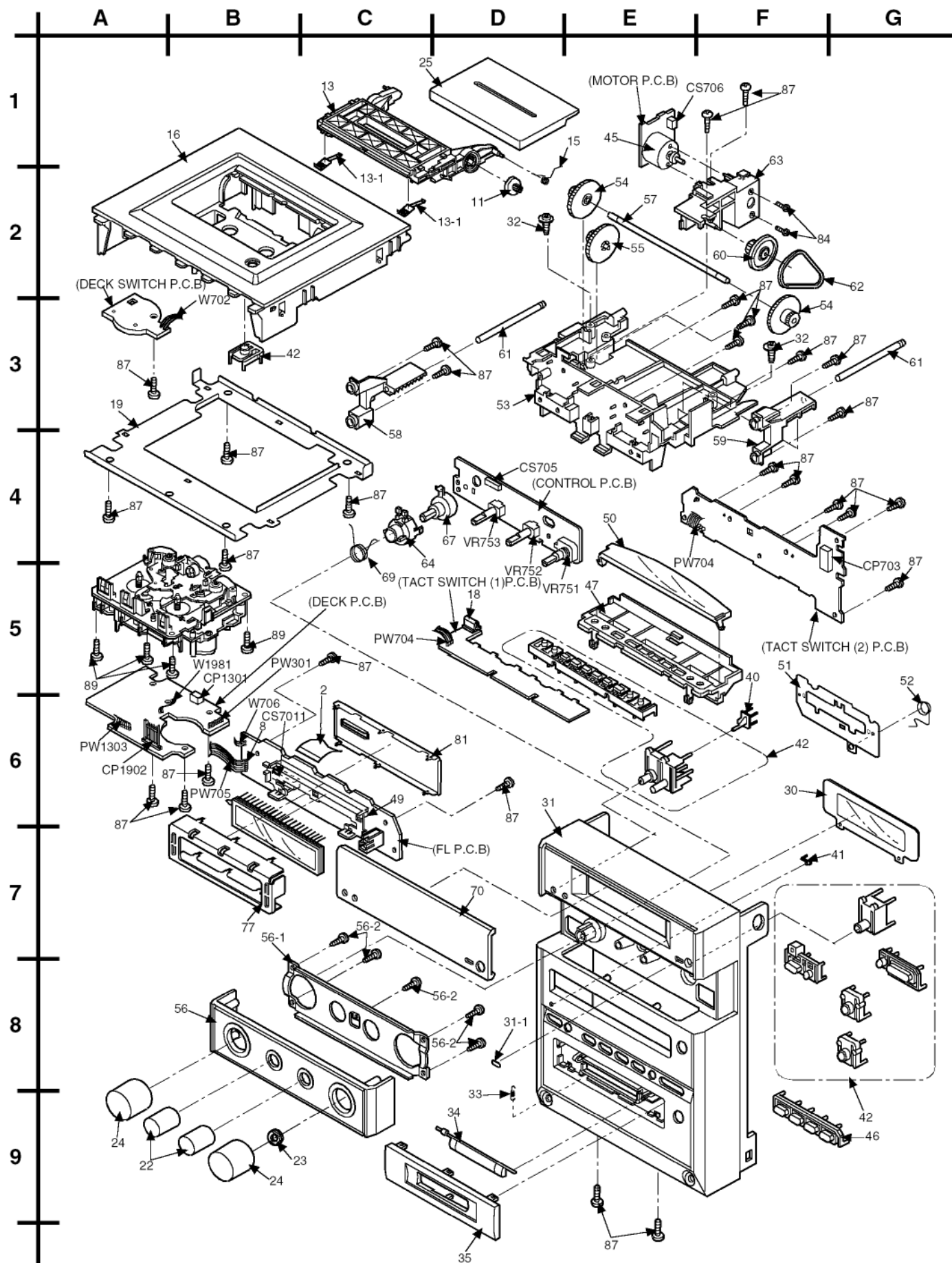


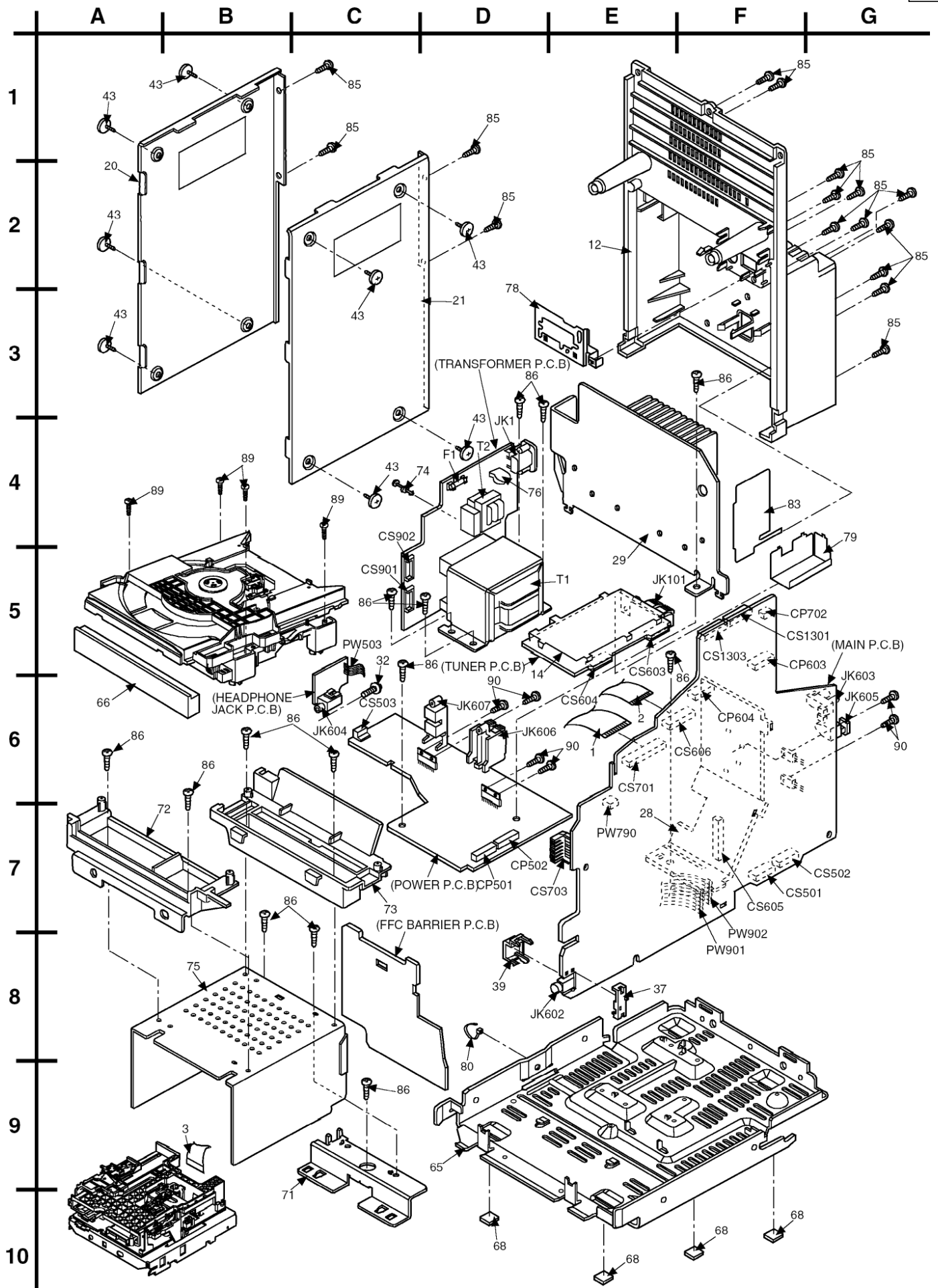
18.3.2. CD Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RAE0155Z	CT100 TRAVERSE	[M]
302	RDG0455	TRAVERSE GEAR (A)	[M]
303	RDG0456	TRAVERSE GEAR (B)	[M]
304	RFKNCT100	TRAVERSE BASE ASS'Y	[M]
304-1	RDG0457	LOAD GEAR (A)	[M]
304-2	RDG0458	LOAD GEAR (B)	[M]
304-3	RDG0459	LOAD GEAR (C)	[M]
304-4	RME0290	PRESS SPRING	[M]
304-5	RME0291	LOCK SPRING	[M]
304-6	RML0551	TRIGGER LEVER	[M]
304-7	RML0552	LOCK LEVER	[M]
304-8	RMM0219	STOPPER	[M]
304-9	XQN17+C28F	SCREW	[M]
304-10	RXQ0632	TRAVERSE MOTOR ASS'Y	[M]
305	RDG0460	CAM GEAR	[M]
306	RDG0461	DRIVE GEAR	[M]
307	RGQ0254-K	TRAY	[M]
308	RHM0001	MAGNET	[M]
309	RMB0603	FLOATING SPRING	[M]
310	RME0288	CENTERING SPRING	[M]
311	RFKNXED50-S	CLAMPER HOLDER ASS'Y	[M]
312	RMG0510-K	FLOATING RUBBER (A)	[M]
313	RMG0511-K	FLOATING RUBBER (B)	[M]
314	RMK0422	MECHA CHASSIS	[M]
315	RMM0218	TRAVERSE DRIVE RACK	[M]
316	RHD30083	SCREW (CAM GEAR)	[M]
317	RMR1223-K	CLAMP PLATE	[M]
318	RMR1242-K	FIXED PLATE	[M]
319	RSH1A049-U	OPEN SWITCH	[M]
320	XTN2+6G	SCREW	[M]
321	RXQ0633	OPU UNIT	[M]

18.4. Cabinet

18.4.1. Cabinet Parts Location





18.5. Electrical Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		P.C.B.	
	REP2575A	SWITCH PCB UNIT	[M] (RTL)
	REP2807B	CU100X PCB UNIT	[M] (RTL)
	REP2857A	MAIN PCB UNIT	[M] (RTL)
	REP2858A	TUNER/CASS/FL/POWER	[M] EG (RTL)
	REP2858D	TUNER/CASS/FL/POWER	[M] EB (RTL)
	REP2895A-T	SERVO UNIT	[M] (RTL)
	REPX0108	R/P PCB UNIT	[M] (RTL)
		INTEGRATED CIRCUITS	
IC1	AN8772FHQ	IC	[M]
IC2	AN8814SB-E1	IC	[M]
IC3	MN66616RA4	IC MSP LSI	[M]
IC4	AK4518VF-E2	IC AD/DA	[M]
IC5	RN5RG33AA-TL	IC REGULATOR	[M] △
IC6	TC7W04FTE12L	IC	[M]
IC9	RN5RZ26BA-TR	IC REGULATOR	[M] △
IC10	MNBDF03DAA1	IC	[M]
IC11	TC74HCT00AFL	IC	[M]
IC72	MNV4400-T8T	IC 4M DRAM	[M]
IC92	LB1830MS-TLM	IC MOTOR DR	[M]
IC101	LA1833MN-TLM	IC IF & MPX	[M]
IC102	LC72131MDTRM	IC PLL	[M]
IC401	BU4052BCF-E2	IC FUNCTION SW	[M]
IC402	BH3857AFV-E2	IC SOUND PROCESSOR	[M]
IC403	AN7135	IC POWER AMP	[M] △
IC404	AN7194K-LD	IC BTC POWER	[M] △
IC700	M9202-01BDR3	IC FL DRIVER	[M]
IC701	AN8837SBE1	IC HEAD AMP	[M]
IC702	MN662790RSC	IC LSI	[M]
IC703	BA5948FPE2	IC 4 CH DRIVE	[M]
IC801	MN101C12GRB1	IC MICON	[M]
IC802	TC74HCT7007A	IC 3V TO 5V	[M]
IC803	TC4050BF	IC 5V TO 3V	[M]
IC901	UPC29M33HF	IC	[M] △
IC902	XC62CP3302TH	IC 3V REGULATOR	[M] △
IC903	BA6283N	IC MOTOR DRIVER	[M]
IC971	ON2180RLC1	IC PHOTO INTERRUPTOR	[M]
IC1301	BA7755A	IC ANALOG SW	[M]
IC1302	TA8142AP	IC PB/REC PRE-AMP	[M]
IC1303	BA4558FE2	IC OP AMP	[M]
		TRANSISTORS	
Q1	2SB1295-6-TB	TRANSISTOR	[M]
Q1	2SC1740SRTA	TRANSISTOR	[M]
Q2	DTC114YETL	TRANSISTOR	[M]
Q3	2SB1462STX	TRANSISTOR	[M]
Q5	2SB1295-6-TB	TRANSISTOR	[M]
Q6	DTC114YETL	TRANSISTOR	[M]
Q10	2SJ278MYTR	TRANSISTOR	[M]
Q11	2SK1764KYTR	TRANSISTOR	[M]
Q13	2SB1121ST-TD	TRANSISTOR	[M] △
Q101	2SC2787LTA	TRANSISTOR	[M]
Q102	2SC2787LTA	TRANSISTOR	[M]
Q106	RVTDTA114EST	TRANSISTOR	[M]
Q401	2SC1740SRTA	TRANSISTOR	[M]
Q402	2SC1740SRTA	TRANSISTOR	[M]
Q403	RVTDTA144EST	TRANSISTOR	[M]
Q404	RVTDTA144EST	TRANSISTOR	[M]
Q405	2SC1740SRTA	TRANSISTOR	[M]
Q431	2SC1740SLNST	TRANSISTOR	[M]
Q432	2SC1740SRTA	TRANSISTOR	[M]
Q451	2SC1740SLNST	TRANSISTOR	[M]
Q501	2SC1740SRTA	TRANSISTOR	[M]
Q502	2SC1740SRTA	TRANSISTOR	[M]
Q505	2SC1740SRTA	TRANSISTOR	[M]
Q531	2SC1740SLNST	TRANSISTOR	[M]
Q532	2SC1740SRTA	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q613	RVTDTA114EST	TRANSISTOR	[M]
Q621	2SC1740SRTA	TRANSISTOR	[M]
Q671	RVTDTA143EST	TRANSISTOR	[M]
Q672	RVTDTA143EST	TRANSISTOR	[M]
Q673	2SC1740SRTA	TRANSISTOR	[M] △
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q701	2SC1740SRTA	TRANSISTOR	[M]
Q702	2SC1740SRTA	TRANSISTOR	[M]
Q751	RVTDTA114EST	TRANSISTOR	[M]
Q754	RVTDTA114YST	TRANSISTOR	[M]
Q801	RVTDTA144EST	TRANSISTOR	[M]
Q802	2SC1740SRTA	TRANSISTOR	[M]
Q803	2SC1740SRTA	TRANSISTOR	[M]
Q804	RVTDTA143XST	TRANSISTOR	[M]
Q805	2SA1309ARTA	TRANSISTOR	[M]
Q806	RVTDTA144EST	TRANSISTOR	[M]
Q807	RVTDTA144EST	TRANSISTOR	[M]
Q808	RVTDTA144EST	TRANSISTOR	[M]
Q809	2SC1740SRTA	TRANSISTOR	[M]
Q901	2SD592ARTA	TRANSISTOR	[M] △
Q902	2SD592ARTA	TRANSISTOR	[M] △
Q903	2SB1566E	TRANSISTOR	[M] △
Q904	2SC1740SRTA	TRANSISTOR	[M] △
Q905	2SB1566E	TRANSISTOR	[M] △
Q906	2SC1740SRTA	TRANSISTOR	[M] △
Q907	2SC1740SRTA	TRANSISTOR	[M] △
Q908	RVTDTA143TST	TRANSISTOR	[M] △
Q910	2SB621ARTA	TRANSISTOR	[M] △
Q911	2SD592ARTA	TRANSISTOR	[M] △
Q912	RVTDTA143XST	TRANSISTOR	[M]
Q913	RVTDTA114YST	TRANSISTOR	[M]
Q914	2SA1309ARTA	TRANSISTOR	[M]
Q961	2SA952LTA	TRANSISTOR	[M] △
Q962	2SC1740SRTA	TRANSISTOR	[M] △
Q973	2SA1309ARTA	TRANSISTOR	[M]
Q974	2SC1740SRTA	TRANSISTOR	[M]
Q1101	2SJ498CTA	TRANSISTOR	[M]
Q1102	2SJ498CTA	TRANSISTOR	[M]
Q1103	2SC1740SRTA	TRANSISTOR	[M]
Q1104	2SC1740SRTA	TRANSISTOR	[M]
Q1105	2SJ498CTA	TRANSISTOR	[M]
Q1106	RVTDTA124TST	TRANSISTOR	[M]
Q1201	2SJ498CTA	TRANSISTOR	[M]
Q1202	2SJ498CTA	TRANSISTOR	[M]
Q1203	2SC1740SRTA	TRANSISTOR	[M]
Q1204	2SC1740SRTA	TRANSISTOR	[M]
Q1205	2SJ498CTA	TRANSISTOR	[M]
Q1206	RVTDTA124TST	TRANSISTOR	[M]
Q1302	2SC1845FTA	TRANSISTOR	[M]
Q1303	2SC2001LTA	TRANSISTOR	[M]
Q1304	RVTDTA114TST	TRANSISTOR	[M]
Q1305	2SC1740SRTA	TRANSISTOR	[M]
Q1306	2SC1740SRTA	TRANSISTOR	[M]
Q1307	2SC1740SRTA	TRANSISTOR	[M]
Q1308	2SC1740SRTA	TRANSISTOR	[M]
Q1309	2SC1740SRTA	TRANSISTOR	[M]
Q1310	RVTDTA114EST	TRANSISTOR	[M]
Q1311	RVTDTA143XST	TRANSISTOR	[M]
Q1313	2SC1740SRTA	TRANSISTOR	[M]
Q1317	RVTDTA143XST	TRANSISTOR	[M]
Q1318	RVTDTA143XST	TRANSISTOR	[M]
Q1319	2SD965RTA	TRANSISTOR	[M]
Q1320	2SB1030RTA	TRANSISTOR	[M]
Q1330	2SC1740SRTA	TRANSISTOR	[M]
		DIODES	
D1	RL1N4003N02	DIODE	[M] △
D2	RL1N4003N02	DIODE	[M] △
D3	RL1N4003N02	DIODE	[M] △
D4	RL1N4003N02	DIODE	[M] △
D5	RVD1SS133TA	DIODE	[M]
D5	SC80209TE12R	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D6	RVD1SS133TA	DIODE	[M]
D6	SC80209TE12R	DIODE	[M]
D7	RL1N4003N02	DIODE	[M] △
D8	RL1N4003N02	DIODE	[M] △
D9	MA728TX	DIODE	[M]
D10	RL1N4003N02	DIODE	[M] △
D11	RL1N4003N02	DIODE	[M] △
D101	MTZJ5R1BTA	DIODE	[M]
D601	RB441Q40T77	DIODE	[M]
D632	RVD1SS133TA	DIODE	[M]
D633	RVD1SS133TA	DIODE	[M]
D634	RVD1SS133TA	DIODE	[M]
D635	RVD1SS133TA	DIODE	[M]
D636	RVD1SS133TA	DIODE	[M]
D637	RB441Q40T77	DIODE	[M]
D651	RVD1SS133TA	DIODE	[M]
D652	RVD1SS133TA	DIODE	[M]
D653	RVD1SS133TA	DIODE	[M]
D654	RVD1SS133TA	DIODE	[M]
D672	AK03WK	DIODE	[M]
D701	RVD1SS133TA	DIODE	[M]
D702	RVD1SS133TA	DIODE	[M]
D703	MTZJ4R7BTA	DIODE	[M]
D750	MA8056MTX	DIODE	[M]
D751	SLR325VCT31	DIODE	[M]
D752	SPR325MVWT31	DIODE	[M]
D753	LNW9A8BYBZ	DIODE	[M]
D791	MTZJ8R2BTA	DIODE	[M]
D800	1SS291TA	DIODE	[M]
D801	1SS291TA	DIODE	[M]
D802	1SS291TA	DIODE	[M]
D803	RVD1SS133TA	DIODE	[M]
D805	RVD1SS133TA	DIODE	[M]
D871	MTZJ5R6ATA	DIODE	[M]
D872	RVD1SS133TA	DIODE	[M]
D873	RVD1SS133TA	DIODE	[M]
D875	RVD1SS133TA	DIODE	[M]
D901	SB360L6508	DIODE	[M] △
D902	SB360L6508	DIODE	[M] △
D903	SB360L6508	DIODE	[M] △
D904	SB360L6508	DIODE	[M] △
D907	1D3E	DIODE	[M]
D908	1D3E	DIODE	[M]
D909	MTZJ7R5ATA	DIODE	[M] △
D910	RVD1SS133TA	DIODE	[M]
D911	1SS291TA	DIODE	[M]
D916	RVD1SS133TA	DIODE	[M]
D920	MTZJ30BTA	DIODE	[M] △
D921	MTZJ16ATA	DIODE	[M] △
D922	1SS291TA	DIODE	[M]
D923	RVD1SS133TA	DIODE	[M]
D925	1D3E	DIODE	[M] △
D955	MTZJ5R1BTA	DIODE	[M] △
D961	RVD1SS133TA	DIODE	[M]
D971	MA165TA	DIODE	[M]
D1301	RVD1SS133TA	DIODE	[M]
D1303	RVD1SS133TA	DIODE	[M]
		VARIABLE RESISTORS	
VR1	EVM3YSX50B14	VR	[M]
VR751	RRV16B24104G	ROTARY ENCORDER	[M]
VR752	RRV11A03B54A	ENCORDED VOL	[M]
VR753	RRV11A03B54A	ENCORDED VOL	[M]
		SWITCHES	
S1	RSH1A91ZA-A	CD SWITCH	[M]
S2	RSH1A91ZA-A	CD SWITCH	[M]
S3	RSH1A044-1A	OPEN SWITCH	[M]
S4	RSH1A91ZA-A	CD SWITCH	[M]
S5	RSH1A044-1A	OPEN SWITCH	[M]
S6	RSH1A044-1A	OPEN SWITCH	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
S7	RSH1A045-1A	TRIGGER SWITCH	[M]
S8	RSP1A023-A	TRV-IN SWITCH	[M]
S701	RSH1A048-A	SW RESET	[M]
S971	RSH1A018-3U	MODE SWITCH	[M]
S972	RSH1A019-2U	SW LEAF	[M]
S973	RSH1A019-2U	SW LEAF	[M]
S974	RSH1A019-2U	SW LEAF	[M]
S975	RSH1A019-2U	SW LEAF	[M]
SW751	EVQ21405R	SW TAPE OPEN	[M]
SW752	EVQ21405R	SW MEMO/SET	[M]
SW753	EVQ21405R	SW MD-EDIT	[M]
SW754	EVQ21405R	SW CANCEL	[M]
SW755	EVQ21405R	SW MD REC MODE	[M]
SW756	EVQ21405R	SW MD & TAPE REC	[M]
SW757	EVQ21405R	SW TAPE REC	[M]
SW758	EVQ21405R	SW MD REC	[M]
SW759	EVQ21405R	SW CD EDIT	[M]
SW760	EVQ21405R	SW AUX 1	[M]
SW761	EVQ21405R	SW P_MD	[M]
SW763	EVQ21405R	SW GLIDE OPEN	[M]
SW764	EVQ21405R	SW CLOCK/TIMER	[M]
SW765	EVQ21405R	SW TIMER	[M]
SW766	EVQ21405R	SW UP	[M]
SW767	EVQ21405R	SW DOWN	[M]
SW775	EVQ21405R	SW POWER	[M]
SW776	EVQ21405R	SW ECO	[M]
SW777	EVQ21405R	SW TUNER/BAND	[M]
SW778	EVQ21405R	SW TAPE	[M]
SW779	EVQ21405R	SW MD PLAY/PAUSE	[M]
SW780	EVQ21405R	SW CD PLAY/PAUSE	[M]
SW781	EVQ21405R	SW R-SKIP	[M]
SW782	EVQ21405R	SW F-SKIP	[M]
SW783	EVQ21405R	SW STOP	[M]
SW784	EVQ21405R	SW CD OPEN/CLOSE	[M]
SW785	EVQ21405R	SW MD EJECT	[M]
SW800	EVQPF104R	SW VERTICAL	[M]
		CONNECTORS	
CN1	RJS2A4526T	CONNECTOR	[M]
CN4	RJS2A4830T	CONNECTOR	[M]
CN6	RJU113W10M	10P CONNECTOR	[M]
CN8	RJS2A4506T	21P CONNECTOR	[M]
CN701	RJS2A6016	16P FPC CONNECTOR	[M]
CN702	RJS1A9319	19P FFC CONNECTOR	[M]
CP6	RJT113W10M	10P CONNECTOR	[M]
CP501	RJT057W008-1	8P CONNECTOR	[M]
CP502	RJT057W008-1	8P CONNECTOR	[M]
CP603	RJT057G07	7P CONNECTOR	[M]
CP604	RJT057G07	7P CONNECTOR	[M]
CP702	RJT029W02V-1	MOTOR CONNECTOR	[M]
CP703	RJT003K008M1	8P CONNECTOR	[M]
CP1301	RJS1A6805-J	CONNECTOR	[M]
CP1902	RJT071K09A	CONNECTOR	[M]
CS501	RJU057W008	8P CONNECTOR	[M]
CS502	RJU057W008	8P CONNECTOR	[M]
CS503	RJS6T7ZA	6P CONNECTOR	[M]
CS603	RJU057G07	7P CONNECTOR	[M]
CS604	RJU057G07	7P CONNECTOR	[M]
CS605	RJS2A3330	30P FFC CP	[M]
CS606	RJS1A9419	FFC CONNECTOR	[M]
CS701	RJS1A9424	24P FFC CONNECTOR	[M]
CS703	RJU003K008M1	BOAD IN CONNECTOR	[M]
CS705	RJP7G17ZA	7P CONNECTOR	[M]
CS706	RJT029W02V-1	MOTOR CONNECTOR	[M]
CS901	RJT029W008-1	8P CONNECTOR	[M]
CS902	RJT029W007-1	7P CONNECTOR	[M]
CS971	RJU071H09M1	CONNECTOR	[M]
CS1301	RJS9T7ZA	9P CONNECTOR	[M]
CS1303	RJS8T7ZA	8P CONNECTOR	[M]
CS7011	RJS1A6224-1	CONNECTOR	[M]
		COILS & TRANSFORMERS	

Ref. No.	Part No.	Part Name & Description	Remarks
L1	RLQU100KT-W	CHIP COIL	[M] △
L1	RLQZ371	CHOKE COIL	[M]
L2	RLQU101KT-W	CHIP COIL	[M]
L3	RLQU101KT-W	CHIP COIL	[M]
L4	RLQU2R2MT-W	CHIP COIL	[M]
L5	RLQU2R2MT-W	CHIP COIL	[M]
L6	RLQU2R2MT-W	CHIP COIL	[M]
L7	RLQU2R2MT-W	CHIP COIL	[M]
L8	RLQA2R2JT1-Y	COIL	[M]
L8	RLQU2R2MT-W	CHIP COIL	[M]
L9	RLQU100KT-W	CHIP COIL	[M]
L10	RLQU100KT-W	CHIP COIL	[M]
L11	RLQU100KT-W	CHIP COIL	[M]
L12	RLQU100KT-W	CHIP COIL	[M]
L13	RLQU2R2MT-W	CHIP COIL	[M]
L14	RLQU2R2MT-W	CHIP COIL	[M]
L15	RLQU100KT-W	CHIP COIL	[M]
L16	RLQU2R2MT-W	CHIP COIL	[M]
L17	RLQP1R8KT2-Y	CHIP COIL	[M]
L18	RLQP1R8KT2-Y	CHIP COIL	[M]
L101	ELESNR22MA	CHOKE COIL	[M]
L102	ELESNR22MA	CHOKE COIL	[M]
L103	ELEXTR47MA9	CHOKE COIL	[M]
L415	RLQA100JT1-Y	COIL	[M]
L515	RLQA100JT1-Y	COIL	[M]
L601	RL500050T-Y	RF CHOKE COIL	[M]
L628	RLQA2R2JT1-Y	COIL	[M]
L636	RLQA470JT1-Y	COIL	[M]
L706	RLQA2R2JT1-Y	COIL	[M]
L802	RLQA100JT1-Y	COIL	[M]
L803	RLQA100JT1-Y	COIL	[M]
L875	RLQA101JT1-Y	COIL	[M]
L877	RL500050T-Y	RF CHOKE COIL	[M]
L880	RLQA101JT1-Y	COIL	[M]
L881	RL500050T-Y	RF CHOKE COIL	[M]
L883	RL500050T-Y	RF CHOKE COIL	[M]
L884	RLQA101JT1-Y	COIL	[M]
L911	RL500050T-Y	RF CHOKE COIL	[M]
L981	RLQB470KTA-Y	COIL	[M]
L1301	RL08B003-K	BIAS OSC COIL	[M]
L1303	RLQA470JT1-Y	COIL	[M]
T1	RTP1M3B015-X	POWER TRANSFORMER	[M] △
T2	RTP1I3E001-V	BABY TRANSFORMER	[M] △
		COMPONENT COMBINATION	
Z1	ERZV10V511CS	ZNR	[M] △
Z101	RLA2Z006M-T	ANT COIL BLOCK	[M]
Z102	RLI2Z006M-T	AM IFT	[M]
Z120	ENV17290G1Y	FM TUNER PACK	[M]
Z751	RCDRPM6937V4	REMOTE SENSOR	[M]
Z801	RSL0289-F	FL	[M]
Z971	EXBF7L355SYV	RADA RESISTOR	[M]
		CERAMIC FILTERS	
CF201	RLFFETNGD01L	CERAMIC CAPACITOR	[M]
CF202	RLFFETMGD01L	CERAMIC FILTER	[M]
		RELAY	
RL1	RSY0040M-0	RELAY	[M] △
		OSCILLATORS	
X1	RSXY10M0M02T	CRYSTAL	[M]
X2	RSXC16M9S03T	CRYSTAL	[M]
X102	RLFDFT13DD	CERAMIC FILTER	[M]
X103	RSXD7M20C01	CRYSTAL 7.2 MHZ	[M]
X701	RSXC16M9S04	CRYSTAL	[M]
X801	RSXZ8M00M02T	FILTER	[M]
X802	RSXD32K0C01	CRYSTAL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		FUSE	
F1	XBA2C06TB0L	FUSE	[M] △
		FUSE HOLDER	
FH1	RJR0169T	FUSE HOLDER	[M]
FH2	RJR0169T	FUSE HOLDER	[M]
		FUSE PROTECTOR	
FP1	RSFMB50KT-L	PROTECTOR	[M] △
FP601	RSFMB20KT-L	PROTECTOR	[M] △
FP602	RSFMB50KT-L	PROTECTOR	[M] △
FP871	RSFMB12KT-L	COIL	[M] △
		THERMISTOR	
TH1	RRSP33J103CW	THERMISTOR	[M]
		JACKS	
JK1	SJS9236-1	JK AC IN LET	[M] △
JK101	RJH5210-1	JK ANTENNA	[M]
JK602	RJJ36TA03-C	JK	[M]
JK603	RJH2206	JK RCA PIN	[M]
JK604	RJJ39T01	JK MIC	[M]
JK605	TORX178A	JK OPTICAL MODULE	[M]
JK606	RJR0054-J	JK SPEAKER TERMINAL	[M]
JK607	RJH2208	JK RCA	[M]
		WIRES	
W702	REX0996	WIRE	[M]
W706	REX0985	FL TO MOTOR	[M]
W1981	RWJ0102050KR	MAIN-MECHA MOTOR WIR	[M]
PW503	RWJ1106260QX	POWER TO H.P	[M]
PW704	RWJ1104240XX	OPE TO REC/EDIT	[M]
PW705	REX0984	VOL TO FL	[M]
PW790	REX0986	CD UNIT TO MAIN	[M]
PW901	REX0982	MAIN TO TRANS 8P	[M]
PW902	REX0983	MAIN TO TRANS 7P	[M]
PW1301	RWJ1109080QX	DECK TO MAIN (9SP)	[M]
PW1303	RWJ1108175QX	DECK TO MAIN (8SP)	[M]
		RESISTORS	
R1	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2	ERDS2TJ472T	4.7K 1/4W	[M]
R2	ERJ3GEYJ102V	1K 1/16W	[M]
R3	ERDS2TJ223T	22K 1/4W	[M]
R3	ERJ3GEYJ472V	4.7K 1/16W	[M]
R4	ERDS2TJ222T	2.2K 1/4W	[M]
R5	ERDS2TJ2R2T	2.2 1/4W	[M]
R5	ERJ3GEYJ1R0V	1 1/16W	[M]
R6	ERJ3GEYJ472V	4.7K 1/16W	[M]
R8	ERJ3GEYJ271V	270 1/16W	[M]
R10	ERDS2TJ2R7T	2.7 1/4W	[M]
R10	ERJ3GEYJ474V	470K 1/16W	[M]
R11	ERDS2TJ2R7T	2.7 1/4W	[M]
R11	ERJ3GEYJ101V	100 1/16W	[M]
R12	ERDS2TJ222T	2.2K 1/4W	[M]
R12	ERJ3GEYJ223V	22K 1/16W	[M]
R13	ERD2FCVG100T	10 1/4W	[M]
R13	ERJ6GEYJ3R3V	3.3 1/10W	[M]
R14	ERJ3GEYD103V	10K 1/16W	[M]
R15	ERJ3GEYJ223V	22K 1/16W	[M]
R16	ERJ3GEYJ104V	100K 1/16W	[M]
R17	ERJ3GEYJ223V	22K 1/16W	[M]
R18	ERJ3GEYJ103V	10K 1/16W	[M]
R19	ERJ3GEYJ102V	1K 1/16W	[M]
R20	ERJ3GEYJ473V	47K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R21	ERJ3GEYJ223V	22K 1/16W	[M]
R22	ERJ3GEY0R00V	0 1/16W	[M]
R23	ERJ3GEYJ272V	2.7K 1/16W	[M]
R24	ERJ3GEYJ473V	47K 1/16W	[M]
R25	ERJ3GEYJ104V	100K 1/16W	[M]
R26	ERJ3GEYJ473V	47K 1/16W	[M]
R28	ERJ3GEYJ473V	47K 1/16W	[M]
R29	ERJ3GEYJ473V	47K 1/16W	[M]
R30	ERJ3GEYJ102V	1K 1/16W	[M]
R31	ERJ3GEYJ223V	22K 1/16W	[M]
R32	ERJ3GEYJ473V	47K 1/16W	[M]
R34	ERJ3GEYJ272V	2.7K 1/16W	[M]
R35	ERJ3GEYJ183V	18K 1/16W	[M]
R36	ERJ3GEYJ273V	27K 1/16W	[M]
R37	ERJ3GEYJ333V	33K 1/16W	[M]
R38	ERJ3GEYJ223V	22K 1/16W	[M]
R42	ERJ3GEYJ102V	1K 1/16W	[M]
R43	ERJ3GEYJ222V	2.2K 1/16W	[M]
R44	ERJ3GEYJ223V	22K 1/16W	[M]
R45	ERJ3GEYJ333V	33K 1/16W	[M]
R46	ERJ3GEYJ222V	2.2K 1/16W	[M]
R47	ERJ3GEYJ473V	47K 1/16W	[M]
R50	ERJ3GEYJ102V	1K 1/16W	[M]
R55	ERJ3GEYJ332V	3.3K 1/16W	[M]
R56	ERJ3GEYJ223V	22K 1/16W	[M]
R58	ERJ3GEYJ682V	6.8K 1/16W	[M]
R59	ERJ3GEYJ683V	68K 1/16W	[M]
R60	ERJ3GEYJ332V	3.3K 1/16W	[M]
R61	ERJ3GEYJ223V	22K 1/16W	[M]
R62	ERJ3GEYJ223V	22K 1/16W	[M]
R63	ERJ3GEYJ103V	10K 1/16W	[M]
R64	ERJ3GEYJ471V	470 1/16W	[M]
R65	ERJ3GEYJ471V	470 1/16W	[M]
R66	ERJ3GEYJ471V	470 1/16W	[M]
R67	ERJ3GEYJ102V	1K 1/16W	[M]
R70	ERJ3GEYJ102V	1K 1/16W	[M]
R71	ERJ3GEYJ220V	22 1/16W	[M]
R72	ERJ3GEYJ220V	22 1/16W	[M]
R73	ERJ3GEYJ393V	39K 1/16W	[M]
R74	ERJ3GEYJ822V	8.2K 1/16W	[M]
R75	ERJ3GEYJ223V	22K 1/16W	[M]
R76	ERJ3GEYJ100V	10 1/16W	[M]
R77	ERJ3GEYJ223V	22K 1/16W	[M]
R78	ERJ3GEYJ102V	1K 1/16W	[M]
R79	ERJ3GEYJ102V	1K 1/16W	[M]
R80	ERJ3GEYJ102V	1K 1/16W	[M]
R81	ERJ3GEYJ223V	22K 1/16W	[M]
R82	ERJ3GEYJ473V	47K 1/16W	[M]
R83	ERJ3GEYJ105V	1M 1/16W	[M]
R84	ERJ3GEYJ153V	15K 1/16W	[M]
R85	ERJ3GEYJ223V	22K 1/16W	[M]
R86	ERJ3GEYJ102V	1K 1/16W	[M]
R87	ERJ3GEYJ102V	1K 1/16W	[M]
R89	ERJ3GEYJ102V	1K 1/16W	[M]
R90	ERJ3GEYJ102V	1K 1/16W	[M]
R93	ERJ3GEYJ102V	1K 1/16W	[M]
R95	ERJ3GEYJ222V	2.2K 1/16W	[M]
R98	ERJ3GEYJ102V	1K 1/16W	[M]
R99	ERJ3GEYJ102V	1K 1/16W	[M]
R100	ERJ3GEYJ473V	47K 1/16W	[M]
R102	ERDS2TJ472T	4.7K 1/4W	[M]
R103	ERDS2TJ101T	100 1/4W	[M]
R103	ERJ3GEYJ102V	1K 1/16W	[M]
R104	ERDS2TJ103T	10K 1/4W	[M]
R104	ERJ3GEYJ272V	2.7K 1/16W	[M]
R105	ERDS2TJ471T	470 1/4W	[M]
R105	ERJ3GEYJ272V	2.7K 1/16W	[M]
R106	ERDS2TJ474T	470K 1/4W	[M]
R107	ERDS2TJ331T	330 1/4W	[M]
R107	ERJ3GEYJ102V	1K 1/16W	[M]
R108	ERDS2TJ474T	470K 1/4W	[M]
R108	ERJ3GEYJ102V	1K 1/16W	[M]
R109	ERDS2TJ331T	330 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R109	ERJ3GEYJ102V	1K 1/16W	[M]
R110	ERDS2TJ562T	5.6K 1/4W	[M]
R110	ERJ3GEYJ102V	1K 1/16W	[M]
R111	ERDS2TJ391T	390 1/4W	[M]
R111	ERJ3GEYJ221V	220 1/16W	[M]
R112	ERDS2TJ104T	100K 1/4W	[M]
R112	ERJ3GEYJ221V	220 1/16W	[M]
R113	ERDS2TJ103T	10K 1/4W	[M]
R114	ERDS2TJ562T	5.6K 1/4W	[M]
R114	ERJ3GEYJ103V	10K 1/16W	[M]
R115	ERDS2TJ561T	560 1/4W	[M]
R115	ERJ3GEYJ103V	10K 1/16W	[M]
R116	ERDS2TJ102T	1K 1/4W	[M]
R116	ERJ3GEYJ101V	100 1/16W	[M]
R117	ERDS2TJ683T	68K 1/4W	[M]
R117	ERJ3GEYJ101V	100 1/16W	[M]
R118	ERDS2TJ472T	4.7K 1/4W	[M]
R118	ERJ3GEYJ102Z	1K 1/16W	[M]
R119	ERDS2TJ333T	33K 1/4W	[M]
R119	ERJ3GEYJ101V	100 1/16W	[M]
R120	ERDS2TJ473T	47K 1/4W	[M]
R120	ERJ3GEYJ101V	100 1/16W	[M]
R121	ERDS2TJ223T	22K 1/4W	[M]
R121	ERJ3GEYJ272V	2.7K 1/16W	[M]
R122	ERDS2TJ272T	2.7K 1/4W	[M]
R122	ERJ3GEYJ272V	2.7K 1/16W	[M]
R123	ERDS2TJ683T	68K 1/4W	[M]
R123	ERJ3GEYJ102V	1K 1/16W	[M]
R124	ERDS2TJ271T	270 1/4W	[M]
R124	ERJ3GEYJ473V	47K 1/16W	[M]
R125	ERDS2TJ471T	470 1/4W	[M]
R125	ERJ3GEYJ473V	47K 1/16W	[M]
R126	ERDS2TJ152T	1.5K 1/4W	[M]
R127	ERDS2TJ471T	470 1/4W	[M]
R128	ERDS2TJ820T	82 1/4W	[M]
R129	ERDS2TJ273T	27K 1/4W	[M]
R130	ERDS2TJ103T	10K 1/4W	[M]
R130	ERJ3GEYJ272V	2.7K 1/16W	[M]
R131	ERDS2TJ680T	68 1/4W	[M]
R131	ERJ3GEYJ101V	100 1/16W	[M]
R132	ERDS2TJ103T	10K 1/4W	[M]
R132	ERJ3GEYJ272V	2.7K 1/16W	[M]
R133	ERDS2TJ102T	1K 1/4W	[M]
R134	ERDS2TJ471T	470 1/4W	[M]
R134	ERJ3GEYJ272V	2.7K 1/16W	[M]
R135	ERDS2TJ102T	1K 1/4W	[M]
R135	ERJ3GEYJ272V	2.7K 1/16W	[M]
R136	ERDS2TJ102T	1K 1/4W	[M]
R137	ERDS2TJ102T	1K 1/4W	[M]
R137	ERJ3GEYJ103V	10K 1/16W	[M]
R138	ERDS2TJ332T	3.3K 1/4W	[M]
R141	ERDS2TJ102T	1K 1/4W	[M]
R142	ERDS2TJ102T	1K 1/4W	[M]
R143	ERDS2TJ223T	22K 1/4W	[M]
R145	ERDS2TJ104T	100K 1/4W	[M]
R145	ERJ3GEYJ221V	220 1/16W	[M]
R146	ERDS2TJ104T	100K 1/4W	[M]
R146	ERJ3GEYJ221V	220 1/16W	[M]
R147	ERJ3GEYJ102V	1K 1/16W	[M]
R174	ERJ3GEYJ103V	10K 1/16W	[M]
R401	ERDS2TJ153T	15K 1/4W	[M]
R402	ERDS2TJ822T	8.2K 1/4W	[M]
R403	ERDS2TJ103T	10K 1/4W	[M]
R404	ERDS2TJ272T	2.7K 1/4W	[M]
R405	ERDS2TJ222T	2.2K 1/4W	[M]
R406	ERDS2TJ273T	27K 1/4W	[M]
R408	ERDS2TJ103T	10K 1/4W	[M]
R409	ERDS2TJ153T	15K 1/4W	[M]
R410	ERDS2TJ331T	330 1/4W	[M]
R411	ERDS2TJ472T	4.7K 1/4W	[M]
R413	ERDS2TJ223T	22K 1/4W	[M]
R414	ERDS2TJ472T	4.7K 1/4W	[M]
R416	ERDS2TJ472T	4.7K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R417	ERDS2TJ473T	47K 1/4W	[M]
R421	ERDS2TJ223T	22K 1/4W	[M]
R423	ERDS2TJ104T	100K 1/4W	[M]
R424	ERDS2TJ472T	4.7K 1/4W	[M]
R425	ERDS2TJ562T	5.6K 1/4W	[M]
R427	ERDS2TJ104T	100K 1/4W	[M]
R428	ERDS2TJ472T	4.7K 1/4W	[M]
R431	ERDS2TJ472T	4.7K 1/4W	[M]
R432	ERDS2TJ104T	100K 1/4W	[M]
R433	ERDS2TJ223T	22K 1/4W	[M]
R434	ERDS2TJ472T	4.7K 1/4W	[M]
R435	ERDS2TJ153T	15K 1/4W	[M]
R436	ERDS2TJ222T	2.2K 1/4W	[M]
R437	ERDS2TJ822T	8.2K 1/4W	[M]
R438	ERDS2TJ682T	6.8K 1/4W	[M]
R440	ERDS2TJ101T	100 1/4W	[M]
R441	ERDS2TJ1R2T	1.2 1/4W	[M]
R442	ERDS2TJ1R0T	1 1/4W	[M]
R443	ERDS2TJ820T	82 1/4W	[M]
R444	ERDS2TJ100T	10 1/4W	[M]
R447	ERDS2TJ681T	680 1/4W	[M]
R449	ERDS2TJ102T	1K 1/4W	[M]
R451	ERDS2TJ473T	47K 1/4W	[M]
R453	ERDS2TJ153T	15K 1/4W	[M]
R454	ERDS2TJ472T	4.7K 1/4W	[M]
R458	ERDS2TJ222T	2.2K 1/4W	[M]
R462	ERDS2TJ822T	8.2K 1/4W	[M]
R463	ERDS2TJ2R2T	2.2 1/4W	[M]
R464	ERDS2TJ2R2T	2.2 1/4W	[M]
R501	ERDS2TJ153T	15K 1/4W	[M]
R502	ERDS2TJ822T	8.2K 1/4W	[M]
R503	ERDS2TJ103T	10K 1/4W	[M]
R504	ERDS2TJ272T	2.7K 1/4W	[M]
R505	ERDS2TJ222T	2.2K 1/4W	[M]
R506	ERDS2TJ273T	27K 1/4W	[M]
R508	ERDS2TJ103T	10K 1/4W	[M]
R509	ERDS2TJ153T	15K 1/4W	[M]
R510	ERDS2TJ331T	330 1/4W	[M]
R511	ERDS2TJ472T	4.7K 1/4W	[M]
R514	ERDS2TJ472T	4.7K 1/4W	[M]
R516	ERDS2TJ472T	4.7K 1/4W	[M]
R517	ERDS2TJ473T	47K 1/4W	[M]
R521	ERDS2TJ223T	22K 1/4W	[M]
R523	ERDS2TJ104T	100K 1/4W	[M]
R524	ERDS2TJ472T	4.7K 1/4W	[M]
R525	ERDS2TJ562T	5.6K 1/4W	[M]
R527	ERDS2TJ104T	100K 1/4W	[M]
R528	ERDS2TJ472T	4.7K 1/4W	[M]
R531	ERDS2TJ472T	4.7K 1/4W	[M]
R532	ERDS2TJ104T	100K 1/4W	[M]
R533	ERDS2TJ223T	22K 1/4W	[M]
R534	ERDS2TJ472T	4.7K 1/4W	[M]
R535	ERDS2TJ153T	15K 1/4W	[M]
R536	ERDS2TJ222T	2.2K 1/4W	[M]
R537	ERDS2TJ822T	8.2K 1/4W	[M]
R538	ERDS2TJ682T	6.8K 1/4W	[M]
R540	ERDS2TJ101T	100 1/4W	[M]
R541	ERDS2TJ1R2T	1.2 1/4W	[M]
R542	ERDS2TJ1R0T	1 1/4W	[M]
R543	ERDS2TJ820T	82 1/4W	[M]
R544	ERDS2TJ100T	10 1/4W	[M]
R547	ERDS2TJ681T	680 1/4W	[M]
R549	ERDS2TJ102T	1K 1/4W	[M]
R551	ERDS2TJ473T	47K 1/4W	[M]
R563	ERDS2TJ2R2T	2.2 1/4W	[M]
R564	ERDS2TJ2R2T	2.2 1/4W	[M]
R613	ERDS2TJ104T	100K 1/4W	[M]
R614	ERDS2TJ334T	330K 1/4W	[M]
R615	ERDS2TJ334T	330K 1/4W	[M]
R616	ERDS2TJ472T	4.7K 1/4W	[M]
R617	ERDS2TJ472T	4.7K 1/4W	[M]
R618	ERDS2TJ330T	33 1/4W	[M]
R619	ERDS2TJ330T	33 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R621	ERDS2TJ272T	2.7K 1/4W	[M]
R624	ERDS2TJ333T	33K 1/4W	[M]
R625	ERDS2TJ333T	33K 1/4W	[M]
R627	ERDS2TJ122T	1.2K 1/4W	[M]
R628	ERDS2TJ472T	4.7K 1/4W	[M]
R629	ERDS2TJ222T	2.2K 1/4W	[M]
R630	ERDS2TJ333T	33K 1/4W	[M]
R635	ERDS2TJ154T	150K 1/4W	[M]
R636	ERDS2TJ472T	4.7K 1/4W	[M]
R637	ERDS2TJ104T	100K 1/4W	[M]
R651	ERDS2TJ153T	15K 1/4W	[M]
R652	ERDS2TJ153T	15K 1/4W	[M]
R653	ERDS2TJ123T	12K 1/4W	[M]
R671	ERDS2TJ103T	10K 1/4W	[M]
R672	ERDS2TJ103T	10K 1/4W	[M]
R674	ERDS2TJ103T	10K 1/4W	[M]
R675	ERDS2TJ472T	4.7K 1/4W	[M]
R676	ERDS2TJ123T	12K 1/4W	[M]
R677	ERDS2TJ472T	4.7K 1/4W	[M]
R678	ERDS2TJ472T	4.7K 1/4W	[M]
R679	ERDS2TJ472T	4.7K 1/4W	[M]
R680	ERDS2TJ472T	4.7K 1/4W	[M]
R681	ERDS2TJ472T	4.7K 1/4W	[M]
R682	ERDS2TJ103T	10K 1/4W	[M]
R684	ERDS2TJ103T	10K 1/4W	[M]
R685	ERDS2TJ103T	10K 1/4W	[M]
R686	ERDS2TJ103T	10K 1/4W	[M]
R687	ERDS2TJ103T	10K 1/4W	[M]
R688	ERDS2TJ103T	10K 1/4W	[M]
R689	ERDS2TJ103T	10K 1/4W	[M]
R701	ERDS2TJ104T	100K 1/4W	[M]
R701	ERJ6GEYJ4R7V	4.7 1/10W	[M]
R702	ERDS2TJ104T	100K 1/4W	[M]
R702	ERJ6GEYJ103V	10K 1/10W	[M]
R703	ERDS2TJ101T	100 1/4W	[M]
R704	ERDS2TJ101T	100 1/4W	[M]
R704	ERJ6GEYJ102V	1K 1/10W	[M]
R705	ERJ6GEYJ154V	150K 1/10W	[M]
R706	ERJ6GEYJ102V	1K 1/10W	[M]
R707	ERJ6GEYJ274V	270K 1/10W	[M]
R708	ERJ6GEYJ823V	82K 1/10W	[M]
R709	ERJ6GEYJ683V	68K 1/10W	[M]
R711	ERJ6GEYJ823V	82K 1/10W	[M]
R712	ERJ8GEYJ221V	220 1/8W	[M]
R714	ERJ6GEYJ101V	100 1/10W	[M]
R715	ERJ6GEYJ102V	1K 1/10W	[M]
R717	ERJ6GEYJ102V	1K 1/10W	[M]
R718	ERDS2TJ333T	33K 1/4W	[M]
R718	ERJ6GEYJ102V	1K 1/10W	[M]
R720	ERDS2TJ332T	3.3K 1/4W	[M]
R721	ERDS2TJ102T	1K 1/4W	[M]
R721	ERJ6GEYJ101V	100 1/10W	[M]
R722	ERDS2TJ102T	1K 1/4W	[M]
R723	ERDS2TJ102T	1K 1/4W	[M]
R723	ERJ6GEYJ103V	10K 1/10W	[M]
R724	ERDS2TJ102T	1K 1/4W	[M]
R724	ERJ6GEYJ153V	15K 1/10W	[M]
R725	ERJ6GEYJ681V	680 1/10W	[M]
R727	ERJ6GEYJ272V	2.7K 1/10W	[M]
R728	ERJ6GEYJ222V	2.2K 1/10W	[M]
R729	ERJ6GEYJ272V	2.7K 1/10W	[M]
R731	ERDS2TJ223T	22K 1/4W	[M]
R731	ERJ6GEYJ103V	10K 1/10W	[M]
R732	ERDS2TJ223T	22K 1/4W	[M]
R732	ERJ6GEYJ102V	1K 1/10W	[M]
R733	ERDS2TJ104T	100K 1/4W	[M]
R734	ERDS2TJ472T	4.7K 1/4W	[M]
R735	ERJ6GEYJ101V	100 1/10W	[M]
R736	ERJ6GEYJ101V	100 1/10W	[M]
R741	ERJ6GEYJ473V	47K 1/10W	[M]
R742	ERJ6GEYJ224V	220K 1/10W	[M]
R744	ERJ6GEYJ124V	120K 1/10W	[M]
R749	ERJ6GEYJ272V	2.7K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R751	ERDS2TJ102T	1K 1/4W	[M]
R752	ERDS2TJ102T	1K 1/4W	[M]
R753	ERDS2TJ122T	1.2K 1/4W	[M]
R753	ERJ6GEYJ100V	10 1/10W	[M]
R754	ERDS2TJ182T	1.8K 1/4W	[M]
R754	ERJ8GEYJ5R6V	5.6 1/8W	[M]
R755	ERDS2TJ222T	2.2K 1/4W	[M]
R756	ERDS2TJ272T	2.7K 1/4W	[M]
R757	ERDS2TJ472T	4.7K 1/4W	[M]
R758	ERDS2TJ682T	6.8K 1/4W	[M]
R759	ERDS2TJ103T	10K 1/4W	[M]
R760	ERDS2TJ223T	22K 1/4W	[M]
R760	ERJ6GEYJ221V	220 1/10W	[M]
R763	ERDS2TJ102T	1K 1/4W	[M]
R764	ERDS2TJ102T	1K 1/4W	[M]
R765	ERDS2TJ122T	1.2K 1/4W	[M]
R766	ERDS2TJ182T	1.8K 1/4W	[M]
R775	ERDS2TJ102T	1K 1/4W	[M]
R776	ERDS2TJ102T	1K 1/4W	[M]
R777	ERDS2TJ122T	1.2K 1/4W	[M]
R778	ERDS2TJ182T	1.8K 1/4W	[M]
R779	ERDS2TJ222T	2.2K 1/4W	[M]
R780	ERDS2TJ272T	2.7K 1/4W	[M]
R781	ERDS2TJ472T	4.7K 1/4W	[M]
R782	ERDS2TJ682T	6.8K 1/4W	[M]
R783	ERDS2TJ103T	10K 1/4W	[M]
R784	ERDS2TJ223T	22K 1/4W	[M]
R785	ERDS2TJ102T	1K 1/4W	[M]
R786	ERDS2TJ470T	47 1/4W	[M]
R787	ERDS2TG103T	10K 1/4W	[M]
R788	ERDS2TG103T	10K 1/4W	[M]
R789	ERDS2TG103T	10K 1/4W	[M]
R790	ERDS2TJ102T	1K 1/4W	[M]
R791	ERDS2TJ681T	680 1/4W	[M]
R792	ERDS2TJ561T	560 1/4W	[M]
R793	ERDS2TJ331T	330 1/4W	[M]
R794	ERDS2TJ102T	1K 1/4W	[M]
R797	ERDS2TJ473T	47K 1/4W	[M]
R798	ERDS2TJ473T	47K 1/4W	[M]
R799	ERDS2TJ103T	10K 1/4W	[M]
R801	ERDS2TJ472T	4.7K 1/4W	[M]
R802	ERDS2TJ472T	4.7K 1/4W	[M]
R803	ERDS2TJ472T	4.7K 1/4W	[M]
R804	ERDS2TJ472T	4.7K 1/4W	[M]
R805	ERDS2TJ472T	4.7K 1/4W	[M]
R806	ERDS2TJ472T	4.7K 1/4W	[M]
R807	ERDS2TJ472T	4.7K 1/4W	[M]
R808	ERDS2TJ472T	4.7K 1/4W	[M]
R809	ERDS2TJ332T	3.3K 1/4W	[M]
R810	ERDS2TJ332T	3.3K 1/4W	[M]
R811	ERDS2TJ331T	330 1/4W	[M]
R812	ERDS2TJ334T	330K 1/4W	[M]
R813	ERDS2TJ331T	330 1/4W	[M]
R815	ERDS2TJ221T	220 1/4W	[M]
R816	ERDS2TJ473T	47K 1/4W	[M]
R817	ERDS2TJ472T	4.7K 1/4W	[M]
R818	ERDS2TJ472T	4.7K 1/4W	[M]
R819	ERDS2TJ472T	4.7K 1/4W	[M]
R820	ERDS2TJ472T	4.7K 1/4W	[M]
R821	ERDS2TJ102T	1K 1/4W	[M]
R822	ERDS2TJ102T	1K 1/4W	[M]
R824	ERDS2TJ103T	10K 1/4W	[M]
R825	ERDS2TJ103T	10K 1/4W	[M]
R826	ERDS2TJ103T	10K 1/4W	[M]
R827	ERDS2TJ103T	10K 1/4W	[M]
R829	ERDS2TJ223T	22K 1/4W	[M]
R830	ERDS2TJ472T	4.7K 1/4W	[M]
R831	ERDS2TJ472T	4.7K 1/4W	[M]
R832	ERDS2TJ472T	4.7K 1/4W	[M]
R833	ERDS2TJ472T	4.7K 1/4W	[M]
R834	ERDS2TJ103T	10K 1/4W	[M]
R835	ERDS2TJ473T	47K 1/4W	[M]
R836	ERDS2TJ472T	4.7K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R837	ERDS2TJ561T	560 1/4W	[M]
R838	ERDS2TJ104T	100K 1/4W	[M]
R839	ERDS2TJ104T	100K 1/4W	[M]
R840	ERDS2TJ101T	100 1/4W	[M]
R841	ERDS2TJ103T	10K 1/4W	[M]
R842	ERDS2TJ103T	10K 1/4W	[M]
R843	ERDS2TJ103T	10K 1/4W	[M]
R844	ERDS2TJ103T	10K 1/4W	[M]
R848	ERDS2TJ103T	10K 1/4W	[M]
R854	ERDS2TJ102T	1K 1/4W	[M]
R855	ERDS2TJ102T	1K 1/4W	[M]
R860	ERDS2TJ102T	1K 1/4W	[M]
R861	ERDS2TJ102T	1K 1/4W	[M]
R862	ERDS2TJ102T	1K 1/4W	[M]
R863	ERDS2TJ102T	1K 1/4W	[M]
R865	ERDS2TJ103T	10K 1/4W	[M]
R866	ERDS2TJ103T	10K 1/4W	[M]
R869	ERDS2TJ472T	4.7K 1/4W	[M]
R870	ERDS2TJ103T	10K 1/4W	[M]
R871	ERDS2TJ103T	10K 1/4W	[M]
R872	ERDS2TJ102T	1K 1/4W	[M]
R873	ERDS2TJ102T	1K 1/4W	[M]
R874	ERDS2TJ331T	330 1/4W	[M]
R875	ERDS2TJ333T	33K 1/4W	[M]
R876	ERDS2TJ223T	22K 1/4W	[M]
R877	ERDS2TJ104T	100K 1/4W	[M]
R878	ERDS2TJ473T	47K 1/4W	[M]
R879	ERDS2TJ103T	10K 1/4W	[M]
R880	ERDS2TJ101T	100 1/4W	[M]
R883	ERDS2TJ471T	470 1/4W	[M]
R884	ERDS2TJ472T	4.7K 1/4W	[M]
R885	ERDS2TJ123T	12K 1/4W	[M]
R886	ERDS2TJ471T	470 1/4W	[M]
R887	ERDS2TJ562T	5.6K 1/4W	[M]
R888	ERDS2TJ562T	5.6K 1/4W	[M]
R889	ERDS2TJ222T	2.2K 1/4W	[M]
R890	ERDS2TJ272T	2.7K 1/4W	[M]
R891	ERDS2TJ272T	2.7K 1/4W	[M]
R892	ERDS2TJ122T	1.2K 1/4W	[M]
R893	ERDS2TJ471T	470 1/4W	[M]
R894	ERDS2TJ103T	10K 1/4W	[M]
R907	ERDS1FVJ330T	33 1/2W	[M]
R910	ERDS2TJ152T	1.5K 1/4W	[M]
R911	ERDS2TJ102T	1K 1/4W	[M]
R912	ERDS2TJ824T	820K 1/4W	[M]
R915	ERDS2TJ102T	1K 1/4W	[M]
R916	ERDS2TJ222T	2.2K 1/4W	[M]
R917	ERDS2TJ104T	100K 1/4W	[M]
R918	ERDS2TJ561T	560 1/4W	[M]
R921	ERDS2TJ1R2T	1.2 1/4W	[M]
R922	ERDS2TJ1R2T	1.2 1/4W	[M]
R923	ERDS2TJ1R2T	1.2 1/4W	[M]
R924	ERDS2TJ104T	100K 1/4W	[M]
R927	ERDS2TJ122T	1.2K 1/4W	[M]
R929	ERDS2TJ331T	330 1/4W	[M]
R930	ERDS2TJ271T	270 1/4W	[M]
R931	ERDS2TG122T	1.2K 1/4W	[M]
R932	ERDS2TG152T	1.5K 1/4W	[M]
R933	ERDS2TJ103T	10K 1/4W	[M]
R934	ERDS2TJ103T	10K 1/4W	[M]
R941	ERDS2TJ472T	4.7K 1/4W	[M]
R943	ERD2FCVG220T	22 1/4W	[M]
R944	ERDS2TJ222T	2.2K 1/4W	[M]
R945	ERDS2TJ101T	100 1/4W	[M]
R946	ERDS2TJ223T	22K 1/4W	[M]
R955	ERDS2TJ223T	22K 1/4W	[M]
R961	ERDS2TJ123T	12K 1/4W	[M]
R962	ERDS2TJ473T	47K 1/4W	[M]
R963	ERDS2TJ332T	3.3K 1/4W	[M]
R964	ERDS2TJ331T	330 1/4W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]
R976	ERDS2TJ102T	1K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R977	ERDS2TJ102T	1K 1/4W	[M]
R978	ERDS2TJ102T	1K 1/4W	[M]
R984	ERDS2TJ101T	100 1/4W	[M]
R1101	ERDS2TJ474T	470K 1/4W	[M]
R1102	ERDS2TJ153T	15K 1/4W	[M]
R1103	ERDS2TJ560T	56 1/4W	[M]
R1104	ERDS2TJ681T	680 1/4W	[M]
R1105	ERDS2TJ103T	10K 1/4W	[M]
R1107	ERDS2TJ334T	330K 1/4W	[M]
R1109	ERDS2TJ273T	27K 1/4W	[M]
R1110	ERDS2TJ222T	2.2K 1/4W	[M]
R1111	ERDS2TJ122T	1.2K 1/4W	[M]
R1112	ERDS2TJ470T	47 1/4W	[M]
R1113	ERDS2TJ392T	3.9K 1/4W	[M]
R1114	ERDS2TJ472T	4.7K 1/4W	[M]
R1115	ERDS2TJ393T	39K 1/4W	[M]
R1116	ERDS2TJ152T	1.5K 1/4W	[M]
R1201	ERDS2TJ474T	470K 1/4W	[M]
R1202	ERDS2TJ153T	15K 1/4W	[M]
R1203	ERDS2TJ560T	56 1/4W	[M]
R1204	ERDS2TJ681T	680 1/4W	[M]
R1205	ERDS2TJ103T	10K 1/4W	[M]
R1207	ERDS2TJ334T	330K 1/4W	[M]
R1209	ERDS2TJ273T	27K 1/4W	[M]
R1210	ERDS2TJ222T	2.2K 1/4W	[M]
R1211	ERDS2TJ122T	1.2K 1/4W	[M]
R1212	ERDS2TJ470T	47 1/4W	[M]
R1213	ERDS2TJ392T	3.9K 1/4W	[M]
R1214	ERDS2TJ472T	4.7K 1/4W	[M]
R1215	ERDS2TJ393T	39K 1/4W	[M]
R1216	ERDS2TJ152T	1.5K 1/4W	[M]
R1301	ERDS2TJ474T	470K 1/4W	[M]
R1302	ERDS2TJ104T	100K 1/4W	[M]
R1303	ERDS2TJ103T	10K 1/4W	[M]
R1304	ERDS2TJ152T	1.5K 1/4W	[M]
R1305	ERDS2TJ152T	1.5K 1/4W	[M]
R1307	ERDS2TJ153T	15K 1/4W	[M]
R1308	ERDS2TJ153T	15K 1/4W	[M]
R1309	ERDS2TJ331T	330 1/4W	[M]
R1310	ERDS2TJ103T	10K 1/4W	[M]
R1311	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1312	ERDS2TJ752T	7.5K 1/4W	[M]
R1313	ERDS2TJ472T	4.7K 1/4W	[M]
R1314	ERDS2TJ153T	15K 1/4W	[M]
R1315	ERDS2TJ472T	4.7K 1/4W	[M]
R1316	ERDS2TJ470T	47 1/4W	[M]
R1317	ERDS2TJ103T	10K 1/4W	[M]
R1318	ERDS2TJ682T	6.8K 1/4W	[M]
R1319	ERDS2TJ823T	82K 1/4W	[M]
R1320	ERDS2TJ103T	10K 1/4W	[M]
R1321	ERDS2TJ103T	10K 1/4W	[M]
R1322	ERDS2TJ102T	1K 1/4W	[M]
R1323	ERDS2TJ393T	39K 1/4W	[M]
R1324	ERDS2TJ822T	8.2K 1/4W	[M]
R1325	ERDS2TJ562T	5.6K 1/4W	[M]
R1326	ERDS2TJ682T	6.8K 1/4W	[M]
R1327	ERDS2TJ102T	1K 1/4W	[M]
R1328	ERDS2TJ101T	100 1/4W	[M]
R1329	ERDS2TJ335T	3.3M 1/4W	[M]
R1330	ERDS2TJ823T	82K 1/4W	[M]
R1331	ERDS2TJ104T	100K 1/4W	[M]
R1332	ERDS2TJ333T	33K 1/4W	[M]
R1333	ERDS2TJ472T	4.7K 1/4W	[M]
R1334	ERDS2TJ393T	39K 1/4W	[M]
R1335	ERDS2TJ682T	6.8K 1/4W	[M]
R1336	ERDS2TJ681T	680 1/4W	[M]
R1337	ERDS2TJ273T	27K 1/4W	[M]
R1338	ERDS2TJ332T	3.3K 1/4W	[M]
R1339	ERDS2TJ473T	47K 1/4W	[M]
R1340	ERDS2TJ223T	22K 1/4W	[M]
R1342	ERDS2TJ123T	12K 1/4W	[M]
R1352	ERDS2TJ473T	47K 1/4W	[M]
R1354	ERDS2TJ332T	3.3K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R1355	ERDS2TJ222T	2.2K 1/4W	[M]
R1391	ERDS2TJ223T	22K 1/4W	[M]
R1395	ERDS2TJ103T	10K 1/4W	[M]
R1396	ERDS2TJ102T	1K 1/4W	[M]
R1397	ERDS2TJ102T	1K 1/4W	[M]
R1399	ERDS2TJ102T	1K 1/4W	[M]
		CAPACITORS	
C1	ECKWRS102MBC	1000P 400V	[M]
C1	ECUV1H221KBV	220P 50V	[M]
C2	ECKR1H103ZF5	0.01 50V	[M]
C3	ECA1CM102B	1000 16V	[M] △
C4	ECUV0J105ZFV	10 6.3V	[M]
C5	ECUVNA224KBV	0.22 10V	[M]
C6	ECEA1HN470UB	47 50V	[M]
C6	ECUV0J105ZFV	10 6.3V	[M]
C7	ECKR1H223ZF5	0.022 50V	[M]
C7	ECUVNA224KBV	0.22 10V	[M]
C8	ECUVNA224KBV	0.22 10V	[M]
C9	ECKR1H223ZF5	0.022 50V	[M]
C11	ECA1JM101B	100 6.3V	[M] △
C11	ECUV1C223KBV	0.022 16V	[M]
C12	ECEA1CKA220B	22 16V	[M] △
C12	ECUV0J474KBV	0.47 6.3V	[M]
C13	ECUV1C393KBV	0.039 16V	[M]
C14	ECUV1H102KBV	1000P 50V	[M]
C15	ECST0GY106RR	10 4V	[M]
C16	ECUV1H181KV	180P 50V	[M]
C17	ECUV1H332KBV	3300P 50V	[M]
C18	ECUV1H562KBV	5600P 50V	[M]
C19	ECUVNC104ZFV	0.1 16V	[M]
C20	ECST0GY106RR	10 16V	[M]
C21	ECUV1H822KBV	8200P 50V	[M]
C22	ECUV1H102KBV	1000P 50V	[M]
C23	ECUVNC104ZFV	0.1 16V	[M]
C24	ECUV1H102KBV	1000P 50V	[M]
C25	ECUV1C393KBV	0.039 16V	[M]
C26	ECUV1H472KBV	4700P 50V	[M]
C28	ECST0GY226RR	22 4V	[M]
C29	ECUV1H332KBV	3300P 50V	[M]
C30	ECUV1E123KBV	0.012 25V	[M]
C31	ECUV1H102KBV	1000P 50V	[M]
C32	ECUV1H102KBV	1000P 50V	[M]
C33	ECST0GY106RR	10 4V	[M]
C34	ECUV1H102KBV	1000P 50V	[M]
C35	ECUV1H102KBV	1000P 50V	[M]
C37	ECUV1H181KV	180P 50V	[M]
C40	ECUVNC104ZFV	0.1 16V	[M]
C41	ECEV0JA331P	330 6.3V	[M]
C42	ECST0GY106RR	10 4V	[M]
C45	ECST0GY106RR	10 4V	[M]
C46	ECUVNC104ZFV	0.1 16V	[M]
C47	ECUV0J105ZFV	10 6.3V	[M]
C48	ECUVNC104ZFV	0.1 16V	[M]
C50	ECUVNC104ZFV	0.1 16V	[M]
C51	ECUV0J105ZFV	10 6.3V	[M]
C52	ECUV0J105ZFV	10 6.3V	[M]
C53	ECUV1H332KBV	3300P 50V	[M]
C55	ECUV1H102KBV	1000P 50V	[M]
C56	ECUV1H102KBV	1000P 50V	[M]
C57	ECUV1H102KBV	1000P 50V	[M]
C58	ECUV1H102KBV	1000P 50V	[M]
C59	ECUV1C823KBV	0.082 16V	[M]
C60	ECEV1CA100R	10 16V	[M]
C61	ECUV0J334KBV	0.33 6.3V	[M]
C62	ECUV1H221KBV	220P 50V	[M]
C64	ECUV1E153KBV	0.015 25V	[M]
C65	ECUV1C104KBV	0.1 16V	[M]
C66	ECUV1C823KBV	0.082 16V	[M]
C67	ECUV1H392KBV	3900P 50V	[M]
C70	ECUV1E123KBV	0.012 25V	[M]
C71	ECUVNC104ZFV	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C72	ECUVNC104ZFB	0.1 16V	[M]
C73	ECUVNC104ZFB	0.1 16V	[M]
C74	ECUVNC104ZFB	0.1 16V	[M]
C75	ECUVNC104ZFB	0.1 16V	[M]
C76	ECUVNC104ZFB	0.1 16V	[M]
C79	ECUVNC104ZFB	0.1 16V	[M]
C80	ECUVNC104ZFB	0.1 16V	[M]
C81	ECUV1H560JCV	56P 50V	[M]
C82	ECUV1C473KBV	0.047 16V	[M]
C83	ECUVNC104ZFB	0.1 16V	[M]
C84	ECUVNC104ZFB	0.1 16V	[M]
C85	ECST0GY106RR	10 4V	[M]
C86	ECUV1E153KBV	0.015 25V	[M]
C87	ECUVNC104ZFB	0.1 16V	[M]
C88	ECUV1H331KBV	330P 50V	[M]
C89	ECUV1H331KBV	330P 50V	[M]
C90	ECUV1H080DCV	8P 50V	[M]
C91	ECUV1H080DCV	8P 50V	[M]
C92	ECUVNC104ZFB	0.1 16V	[M]
C93	ECUVNC104ZFB	0.1 16V	[M]
C94	ECST0GY475RR	47 4V	[M]
C95	ECUVNC104ZFB	0.1 16V	[M]
C96	ECST0GY475RR	47 4VP	[M]
C97	ECST0GY475RR	47 4VP	[M]
C98	ECUVNC104ZFB	0.1 16V	[M]
C99	ECUV1H102KBV	1000P 50V	[M]
C100	ECUVNC104ZFB	0.1 16V	[M]
C101	ECBT1C103NS5	0.01 16V	[M]
C101	ECST0GY106RR	10 4V	[M]
C102	ECA1CAK101XB	100 16V	[M]
C102	ECUVNC104ZFB	0.1 16V	[M]
C103	ECBT1C103NS5	0.01 16V	[M]
C103	ECST0GY106RR	10 4V	[M]
C104	ECBT1H102KB5	1000P 50V	[M]
C105	ECBT1H102KB5	1000P 50V	[M]
C106	ECBT1C103NS5	0.01 16V	[M]
C106	ECUV1H102KBV	1000P 50V	[M]
C107	ECBT1H473ZF5	0.047 50V	[M]
C108	ECBT1H8R2KC5	8.2P 50V	[M]
C109	ECBT1H102KB5	1000P 50V	[M]
C110	ECBT1C103NS5	0.01 16V	[M]
C110	ECUVNC104ZFB	0.1 16V	[M]
C111	ECEA1EKA4R7B	4.7 25V	[M]
C111	ECST0GY106RR	10 4V	[M]
C112	ECBT1C103NS5	0.01 16V	[M]
C112	ECEV1CA100R	10 16V	[M]
C113	ECBT1H102KB5	1000P 50V	[M]
C113	ECUVNC104ZFB	0.1 16V	[M]
C114	ECA1HAK3R3XB	3.3 50V	[M]
C114	ECUV1H561KBV	560P 50V	[M]
C115	ECEA1EKA4R7B	4.7 25V	[M]
C115	ECUV1H561KBV	560P 50V	[M]
C116	ECFR1C333KR	0.033 16V	[M]
C117	ECEV0JA331P	330 6.3V	[M]
C117	ECFR1C183KR	0.018 16V	[M]
C118	ECFR1C183KR	0.018 16V	[M]
C118	ECUVNA105KBN	10 10V	[M]
C119	ECQP1391JZT	390P 100V	[M]
C119	ECUV1H102KBV	1000P 50V	[M]
C120	ECA1EAK100XB	10 25V	[M]
C120	ECUV1H560JCV	56P 50V	[M]
C121	ECEA1HAK47B	0.47 50V	[M]
C121	ECUV1H102KBV	1000P 50V	[M]
C122	ECEA1HKA010B	1 50V	[M]
C122	ECUV0J105ZFB	10 6.3V	[M]
C123	ECEA1HKA010B	1 50V	[M]
C123	ECUVNC104ZFB	0.1 16V	[M]
C124	ECBT1H101KB5	100P 50V	[M]
C125	ECEA1EKA220B	22 25V	[M]
C126	ECBT1H473ZF5	0.047 50V	[M]
C127	ECEA1CAK220B	22 16V	[M]
C128	ECUVNC104ZFB	0.1 16V	[M]
C129	ECEA0JKA101B	100 6.3V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C129	ECUV1H101JCV	100P 50V	[M]
C130	ECEA0JKA101B	100 6.3V	[M]
C131	ECBT1H101KB5	100P 50V	[M]
C132	ECBT1H102KB5	1000P 50V	[M]
C133	ECBT1H150JC5	15P 50V	[M]
C133	ECUV0J105ZFB	10 6.3V	[M]
C134	ECBT1H180JC5	18P 50V	[M]
C134	ECUV1H331KBV	330P 50V	[M]
C136	ECBT1H102KB5	1000P 50V	[M]
C137	ECFR1C472KR	4700P 16V	[M]
C138	ECBT1C103KS5	0.01 16V	[M]
C138	ECEV0JA470SR	47 6.3V	[M]
C139	ECFR1C472KR	4700P 16V	[M]
C139	ECUVNC104ZFB	0.1 16V	[M]
C140	ECUVNC104ZFB	0.1 16V	[M]
C141	ECEA1HKA010B	1 50V	[M]
C141	ECUVNC104ZFB	0.1 16V	[M]
C142	ECEA1HKA010B	1 50V	[M]
C142	ECUVNC104ZFB	0.1 16V	[M]
C143	ECBT1C682KR5	6800P 16V	[M]
C143	ECST0GY106RR	10 4V	[M]
C144	ECBT1C682KR5	6800P 16V	[M]
C144	ECUV1E103KBV	0.01 25V	[M]
C147	ECBT1H102KB5	1000P 50V	[M]
C147	ECUV1E103KBV	0.01 25V	[M]
C148	ECBT1C103NS5	0.01 16V	[M]
C148	ECUV1E103KBV	0.01 25V	[M]
C149	ECBT1H104ZF5	0.1 50V	[M]
C149	ECUV1E103KBV	0.01 25V	[M]
C154	ECUV1H330JCV	33P 50V	[M]
C155	ECUV1H330JCV	33P 50V	[M]
C401	ECA1EAK100XB	10 25V	[M]
C402	ECA1EAK100XB	10 25V	[M]
C403	ECA1CAK470XB	47 16V	[M]
C404	ECFR1C104KR	0.1 16V	[M]
C405	ECFR1C104KR	0.1 16V	[M]
C407	ECBT1H821KB5	820P 50V	[M]
C408	ECFR1C223MR	0.022 16V	[M]
C409	ECBT1H101KB5	100P 50V	[M]
C410	ECA1HAK3R3XB	3.3 50V	[M]
C412	ECBT1H221KB5	220P 50V	[M]
C413	ECFR1C473KR	0.047 16V	[M]
C414	ECBT1H561KB5	560P 50V	[M]
C415	ECA1HAK2R2XB	2.2 50V	[M]
C417	ECFR1C333KR	0.033 16V	[M]
C420	ECBT1C103MS5	0.01 16V	[M]
C421	ECBT1H101KB5	100P 50V	[M]
C422	ECBT1H101KB5	100P 50V	[M]
C425	ECBT1H101KB5	100P 50V	[M]
C426	ECBT1H101KB5	100P 50V	[M]
C427	ECBT1H221KB5	220P 50V	[M]
C431	ECQV1H154JZ3	0.15 50V	[M]
C432	ECQV1H154JZ3	0.15 50V	[M]
C433	ECBT1H471KB5	470P 50V	[M]
C434	ECQV1H154JZ3	0.15 50V	[M]
C435	ECBT1C152KR5	1500P 16V	[M]
C438	ECFR1C183KR	0.018 16V	[M]
C441	ECA1EAK100XB	10 25V	[M]
C442	ECBT1H102KB5	1000P 50V	[M]
C443	ECA1CAK101XB	100 16V	[M]
C444	ECA1CAK101XB	100 16V	[M]
C445	ECA1CPXL471E	470 16V	[M]
C447	ECQV1H224JZ3	0.22 50V	[M]
C448	ECEA1AKA221Q	220 10V	[M]
C449	ECBT1H473ZF5	0.047 50V	[M]
C450	ECBT1H473ZF5	0.047 50V	[M]
C451	ECQV1H154JZ3	0.15 50V	[M]
C452	ECFR1C473KR	0.047 16V	[M]
C453	ECBT1H471KB5	470P 50V	[M]
C454	ECA1EAK100XB	10 25V	[M]
C456	ECQV1H334JZ3	0.33 50V	[M]
C462	ECBT1H471KB5	470P 50V	[M]
C463	ECQV1H224JZ3	0.22 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C464	ECQV1H224JZ3	0.22 50V	[M]
C465	ECBT1H102KB5	1000P 50V	[M]
C501	ECA1EAK100XB	10 25V	[M]
C502	ECA1EAK100XB	10 25V	[M]
C504	ECFR1C104KR	0.1 16V	[M]
C505	ECFR1C104KR	0.1 16V	[M]
C507	ECBT1H821KB5	820P 50V	[M]
C508	ECFR1C223MR	0.022 16V	[M]
C509	ECBT1H101KB5	100P 50V	[M]
C510	ECA1HAK3R3XB	3.3 50V	[M]
C512	ECBT1H221KB5	220P 50V	[M]
C513	ECA1EAK100XB	10 25V	[M]
C514	ECBT1H561KB5	560P 50V	[M]
C515	ECA1HAK2R2XB	2.2 50V	[M]
C517	ECFR1C333KR	0.033 16V	[M]
C521	ECBT1H101KB5	100P 50V	[M]
C522	ECBT1H101KB5	100P 50V	[M]
C525	ECBT1H101KB5	100P 50V	[M]
C526	ECBT1H101KB5	100P 50V	[M]
C527	ECBT1H101KB5	100P 50V	[M]
C531	ECQV1H154JZ3	0.15 50V	[M]
C532	ECQV1H154JZ3	0.15 50V	[M]
C533	ECBT1H471KB5	470P 50V	[M]
C534	ECQV1H154JZ3	0.15 50V	[M]
C535	ECBT1C152KR5	1500P 16V	[M]
C538	ECFR1C183KR	0.018 16V	[M]
C541	ECA1EAK100XB	10 25V	[M]
C542	ECBT1H102KB5	1000P 50V	[M]
C543	ECA1CAK101XB	100 16V	[M]
C544	ECA1CAK101XB	100 16V	[M]
C545	ECA1CPXL471E	470 16V	[M]
C547	ECQV1H224JZ3	0.22 50V	[M]
C548	ECEA1AKA221Q	220 10V	[M]
C549	ECBT1H473ZF5	0.047 50V	[M]
C550	ECBT1H473ZF5	0.047 50V	[M]
C562	ECBT1H471KB5	470P 50V	[M]
C563	ECQV1H224JZ3	0.22 50V	[M]
C564	ECQV1H224JZ3	0.22 50V	[M]
C565	ECBT1H102KB5	1000P 50V	[M]
C601	ECBT1E103ZF5	0.01 25V	[M]
C609	ECEA1HKA010B	1 50V	[M]
C610	ECEA1HKA010B	1 50V	[M]
C611	ECEA1HKA010B	1 50V	[M]
C612	ECEA1AKA101B	100 10V	[M]
C615	ECBT1H471KB5	470P 50V	[M]
C616	ECEA1HKA010B	1 50V	[M]
C617	ECA1CM471B	470 16V	[M]
C621	ECEA1CKA101B	100 16V	[M]
C624	ECA1EAK100XB	10 25V	[M]
C625	ECA1EAK100XB	10 25V	[M]
C626	ECA1EM331B	330 25V	[M]
C627	ECBT1H221KB5	220P 50V	[M]
C628	ECA1EAK100XB	10 25V	[M]
C630	ECEA1AKA220B	22 10V	[M]
C635	ECA1EAK100XB	10 25V	[M]
C637	ECEA1EKA330B	33 25V	[M]
C671	ECBT1H102KB5	1000P 50V	[M]
C672	ECBT1H102KB5	1000P 50V	[M]
C673	ECEA1AKA220B	22 10V	[M]
C674	ECEA1CKA101B	100 16V	[M]
C675	ECBT1H221KB5	220P 50V	[M]
C676	ECBT1H221KB5	220P 50V	[M]
C701	ECBT1H102KB5	1000P 50V	[M]
C701	ECEA0JKA330I	33 6.3V	[M]
C702	ECBT1H102KB5	1000P 50V	[M]
C702	ECUV1E104MBN	0.1 25V	[M]
C703	ECEA0JKA101I	100 6.3V	[M]
C703	ECEA1HKS100B	10 50V	[M]
C704	ECBT1H105ZF5	10 50V	[M]
C704	ECUV1E104MBN	0.1 25V	[M]
C705	ECEA1HKS220Q	22 50V	[M]
C706	ECEA1HKS220Q	22 50V	[M]
C706	ECUV1H272KBN	2700P 50V	[M]



Ref. No.	Part No.	Part Name & Description	Remarks
C707	ECUV1E273KBN	0.027 25V	[M]
C708	ECBT1C103MS5	0.01 16V	[M]
C709	ECEA0JKS101B	100 6.3V	[M]
C710	ECEA0JKS331Q	330 6.3V	[M]
C710	ECUV1H121JCN	120P 50V	[M]
C711	ECEA1HKS220Q	22 50V	[M]
C711	ECUV1E104KBN	0.1 25V	[M]
C712	ECEA1HKS220Q	22 50V	[M]
C712	ECUV1E104KBN	0.1 25V	[M]
C713	ECBT1H104ZF5	0.1 50V	[M]
C713	ECUV1E104MBN	0.1 25V	[M]
C714	ECEA0JKA101I	100 6.3V	[M]
C714	ECEA1HKS220Q	22 50V	[M]
C715	ECBT1H104ZF5	0.1 50V	[M]
C715	ECUV1H272KBN	2700P 50V	[M]
C716	ECBT1H470J5	47P 50V	[M]
C716	ECUV1H821KBN	820P 50V	[M]
C717	ECUV1E104ZFN	0.1 25V	[M]
C718	ECBT1H102KB5	1000P 50V	[M]
C718	ECUV1C224KBN	0.22 16V	[M]
C720	ECBT1H105ZF5	10 50V	[M]
C721	ECBT1H101KB5	100P 50V	[M]
C721	ECUV1H100JCN	10P 50V	[M]
C722	ECBT1H101KB5	100P 50V	[M]
C722	ECUV1H100JCN	10P 50V	[M]
C723	ECBT1H101KB5	100P 50V	[M]
C723	ECEA1AKA221I	220 10V	[M]
C724	ECBT1H101KB5	100P 50V	[M]
C724	ECUV1E104MBN	0.1 25V	[M]
C725	ECUV1H102KBN	1000P 50V	[M]
C726	ECUV1H102KBN	1000P 50V	[M]
C727	ECA1HAK010XI	1 50V	[M]
C728	ECA1HAK010XI	1 50V	[M]
C730	ECUV1E104ZFN	0.1 25V	[M]
C731	ECA0JAK221XI	220 6.3V	[M]
C731	ECBT1H101KB5	100P 50V	[M]
C732	ECBT1C103MS5	0.01 16V	[M]
C732	ECEA0JKA221I	220 6.3V	[M]
C733	ECUV1E104MBN	0.1 25V	[M]
C734	ECEA1AKA221I	220 10V	[M]
C735	ECUV1E104ZFN	0.1 25V	[M]
C736	ECUV1E104ZFN	0.1 25V	[M]
C737	ECUV1E104ZFN	0.1 25V	[M]
C738	ECUV1H563KBN	0.056 50V	[M]
C739	ECUV1H222KBN	2200P 50V	[M]
C742	ECUV1E273KBN	0.027 25V	[M]
C743	ECUV1E104ZFN	0.1 25V	[M]
C744	ECUV1E822KBN	8200P 25V	[M]
C745	ECUV1E104ZFN	0.1 25V	[M]
C747	ECUV1H181JCN	180P 50V	[M]
C749	ECUV1H222KBN	2200P 50V	[M]
C750	ECUV1E104MBN	0.1 25V	[M]
C751	ECUV1E104MBN	0.1 25V	[M]
C752	ECUV1H152KBN	1500P 50V	[M]
C753	ECUV1H471KBN	470P 50V	[M]
C754	ECUV1H471KBN	470P 50V	[M]
C791	ECEA0JKA470B	47 6.3V	[M]
C792	ECBT1E103ZF5	0.01 25V	[M]
C794	ECBT1H102KB5	1000P 50V	[M]
C795	ECBT1H102KB5	1000P 50V	[M]
C801	ECBT1H561KB5	560P 50V	[M]
C802	ECBT1H561KB5	560P 50V	[M]
C803	ECBT1H561KB5	560P 50V	[M]
C804	ECBT1H561KB5	560P 50V	[M]
C805	ECBT1H561KB5	560P 50V	[M]
C806	ECBT1H561KB5	560P 50V	[M]
C807	ECBT1H561KB5	560P 50V	[M]
C808	ECBT1H561KB5	560P 50V	[M]
C810	ECBT1H104ZF5	0.1 50V	[M]
C811	ECBT1H560J5	56P 50V	[M]
C812	ECBT1H560J5	56P 50V	[M]
C813	ECBT1H470J5	47P 50V	[M]
C814	ECBT1H330J5	33P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C815	ECBT1H102KB5	1000P 50V	[M]
C816	ECBT1H102KB5	1000P 50V	[M]
C817	ECBT1H150JC5	15P 50V	[M]
C818	ECBT1H180JC5	18P 50V	[M]
C819	ECBT1H104ZF5	0.1 50V	[M]
C820	ECEA1HKA010B	1 50V	[M]
C822	ECA0JM102B	1000 6.3V	[M]
C823	ECBT1H102KB5	1000P 50V	[M]
C825	ECEA1HKA010B	1 50V	[M]
C826	ECEA1HKA010B	1 50V	[M]
C827	ECBT1H101KB5	100P 50V	[M]
C828	ECBT1E103ZF5	0.01 25V	[M]
C831	ECBT1H101KB5	100P 50V	[M]
C832	ECEA0JKA470B	47 6.3V	[M]
C842	ECBT1H331KB5	330P 50V	[M]
C843	ECBT1H331KB5	330P 50V	[M]
C844	ECBT1H331KB5	330P 50V	[M]
C845	ECBT1H561KB5	560P 50V	[M]
C846	ECBT1H561KB5	560P 50V	[M]
C870	ECBT1H331KB5	330P 50V	[M]
C872	ECEA1HKA4R7B	4.7 50V	[M]
C873	ECBT1E103ZF5	0.01 25V	[M]
C875	ECEA0JKA220B	22 6.3V	[M]
C877	ECEA0JKA101B	100 6.3V	[M]
C878	ECEA0JKA331Q	330 6.3V	[M]
C879	ECBT1H680J5	68P 50V	[M]
C880	ECBT1E103ZF5	0.01 25V	[M]
C881	ECBT1H473ZF5	0.047 50V	[M]
C883	ECBT1H104ZF5	0.1 50V	[M]
C886	ECBT1C103MS5	0.01 16V	[M]
C893	ECBT1H270J5	27P 50V	[M]
C900	ECQE2104KF3	0.1 250V	[M]
C901	ECBT1H103ZF5	0.01 50V	[M]
C902	ECBT1H103ZF5	0.01 50V	[M]
C903	ECBT1H103ZF5	0.01 50V	[M]
C904	ECBT1H103ZF5	0.01 50V	[M]
C905	ECA1EM222E	2200 25V	[M]
C910	ECA1EAM682XE	6800 25V	[M]
C911	ECBT1H102KB5	1000P 50V	[M]
C912	ECBT1C103MS5	0.01 16V	[M]
C913	ECA1CAK470XB	47 16V	[M]
C915	ECA1EAK100XB	10 25V	[M]
C916	ECBT1E103ZF5	0.01 25V	[M]
C920	ECBT1H104ZF5	0.1 50V	[M]
C921	ECA1EAK100XB	10 25V	[M]
C922	ECBT1E103ZF5	0.01 25V	[M]
C923	ECA1EAK100XB	10 25V	[M]
C925	ECBT1H103ZF5	0.01 50V	[M]
C926	ECEA1HKA100B	10 50V	[M]
C927	ECQB1H102JF3	1000P 50V	[M]
C928	ECBT1H104ZF5	0.1 50V	[M]
C929	ECKR1H223ZF5	0.022 50V	[M]
C930	ECA1VM221B	220 35V	[M]
C932	ECEA1CKA101B	100 16V	[M]
C935	ECBT1C103MS5	0.01 16V	[M]
C937	ECA1CAK470XB	47 16V	[M]
C951	ECA1EAK100XB	10 25V	[M]
C961	ECEA1HKA010B	1 50V	[M]
C962	ECBT1H104KB5	0.1 50V	[M]
C971	ECEA1HKA010B	1 50V	[M]
C972	ECEA0JKA220B	22 6.3V	[M]
C980	ECBT1H102KB5	1000P 50V	[M]
C983	ECA1EAK100XB	10 25V	[M]
C1102	ECBT1C152MR5	1500P 16V	[M]
C1103	ECEA0JKA470B	47 6.3V	[M]
C1104	ECBT1H331KB5	330P 50V	[M]
C1105	ECFR1C153KR	0.015 16V	[M]
C1106	ECEA1EKA4R7B	4.7 25V	[M]
C1107	ECEA1HKA010B	1 50V	[M]
C1108	ECEA0JKA470B	47 6.3V	[M]
C1111	ECEA1EKA4R7B	4.7 25V	[M]
C1112	ECBT1H102KB5	1000P 50V	[M]
C1113	ECBT1H102KB5	1000P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1114	ECBT1H102KB5	1000P 50V	[M]
C1115	ECBT1H101KB5	100P 50V	[M]
C1202	ECBT1C152MR5	1500P 16V	[M]
C1203	ECEA0JKA470B	47 6.3V	[M]
C1204	ECBT1H331KB5	330P 50V	[M]
C1205	ECFR1C153KR	0.015 16V	[M]
C1206	ECEA1EKA4R7B	4.7 25V	[M]
C1207	ECEA1HKA010B	1 50V	[M]
C1208	ECEA0JKA470B	47 6.3V	[M]
C1211	ECEA1EKA4R7B	4.7 25V	[M]
C1212	ECBT1H102KB5	1000P 50V	[M]
C1213	ECBT1H102KB5	1000P 50V	[M]
C1214	ECBT1H102KB5	1000P 50V	[M]
C1215	ECBT1H101KB5	100P 50V	[M]
C1301	ECEA1HN010SB	1 50V	[M]
C1303	ECBT1C103MS5	0.01 16V	[M]
C1305	ECQP2A102JZT	1000P 100V	[M]
C1306	ECQP2A472JZT	4700P 100V	[M]
C1307	ECEA1HKA010B	1 50V	[M]
C1308	ECA1CM101B	100 16V	[M]
C1309	ECQV1H473JZ3	0.047 50V	[M]
C1310	ECBT1H102KB5	1000P 50V	[M]
C1311	ECBT1H102KB5	1000P 50V	[M]
C1312	ECBT1C222MR5	2200P 16V	[M]
C1313	ECBT1C222MR5	2200P 16V	[M]
C1314	ECBT1C332MR5	3300P 16V	[M]
C1315	ECA1EAK100XB	10 25V	[M]
C1316	ECFR1C104KR	0.1 16V	[M]
C1317	ECBT1H470J5	47P 50V	[M]
C1318	ECA1HAK3R3XB	3.3 50V	[M]
C1319	ECEA1AKA221Q	220 10V	[M]
C1320	ECEA1AKA220B	22 10V	[M]
C1321	ECEA1AKA220B	22 10V	[M]
C1322	ECEA0JKA470B	47 6.3V	[M]
C1323	ECBT1C103MS5	0.01 16V	[M]
C1324	ECBT1C472MR5	4700P 16V	[M]
C1326	ECA1EAK100XB	10 25V	[M]
		CHIP JUMPER	
RJ701	ERJ6GEY0R00V	0 1/10W	[M]
RJ702	ERJ8GEY0R00V	0 1/8W	[M]
RJ703	ERJ8GEY0R00V	0 1/8W	[M]
RJ709	ERJ8GEY0R00V	0 1/8W	[M]
RJ712	ERJ8GEY0R00V	0 1/8W	[M]
RJ722	ERJ6GEY0R00V	0 1/10W	[M]
RJ723	ERJ6GEY0R00V	0 1/10W	[M]
RJ724	ERJ6GEY0R00V	0 1/10W	[M]
RJ726	ERJ6GEY0R00V	0 1/10W	[M]
RJ727	ERJ6GEY0R00V	0 1/10W	[M]
RJ728	ERJ6GEY0R00V	0 1/10W	[M]
RJ731	ERJ6GEY0R00V	0 1/10W	[M]
RJ732	ERJ6GEY0R00V	0 1/10W	[M]
RJ734	ERJ6GEY0R00V	0 1/10W	[M]
		TEST JUMPER	
TJ701	EYF8CU	TEST JUMPER	[M]

18.6. Packing Materials & Accessories Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG4593	PACKING CASE	[M]
P2	RPN1225	POLYFOAM	[M]
P3	RPH0192	PROTECT SHEET	[M]
		ACCESSORIES	

Ref. No.	Part No.	Part Name & Description	Remarks
A1	EUR647201	REMOTE CONTROL	[M]
A1-1	UR64EC1822R	R/C BATTERY COVER	[M]
A2	RJA0019-2K	AC CORD (SF)	[M]EG 
A2	VJA0733	AC CORD (SF)	[M]EB 
A3	RQT5148-D	O/I BOOK	[M]EG

Ref. No.	Part No.	Part Name & Description	Remarks
A3	RQT5149-H	O/I BOOK	[M]EG
A3	RQT5151-B	O/I BOOK	[M]EB
A4	RSA0007	FM ANTENNA	[M]
A5	RSA0026	AM LOOP ANT	[M]
A6	SJP9009	ANT ADAPTER	[M]EB

18.7. Packaging

